Filling the void:
Exchanging the Advantages of an
Emergency Manager within the Edina Fire Department.

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writing of another.

Signed: ____________________________
Abstract

The problem was Edina fire does not have an emergency management planner. The purpose was to identify the impact of an emergency manager on the EFD. Document review, surveys, interviews and personal communications answered four descriptive research questions: What concepts, components, characteristics and training would be part of an emergency management planner, how do other fire jurisdictions address their emergency management needs, what emergency incidents and disasters are likely to impact Edina, and why is it important for EFD to have an emergency management planner.

Results indicated an emergency manager would benefit EFD and best practices are available that should be considered.

Recommendation is to develop and implement an emergency management position for the Edina Fire Department.
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Introduction

The problem is the Edina Fire Department (EFD) does not have an emergency management planner, thereby increasing the risk of injury and death to EFD fire fighters who respond to emergency incidents and disasters. The purpose of this research project is to identify the potential impact of an emergency management planner on the EFD.

Descriptive research methodology was used to complete this research project with a goal of identifying the positive influences an emergency management planner may have on the EFD. The results and conclusions of this research will be discussed with the EFD Fire Chief and will complement the City Emergency Operations Plan (EOP).

The following questions were researched:

1. What concepts, components, characteristics and training would be part of an emergency management planner?

2. How do other fire jurisdictions address their emergency management needs?

3. What emergency incidents and disasters are likely to impact the City of Edina, Minnesota?

4. Why is it important for EFD to have an emergency management planner?
Background and Significance

Edina Minnesota began as a small farming and milling community in the 1860s. In 1888 the area, now known as Edina, incorporated and became the Village of Edina. With formal approval by the Village of Edina council members, the Edina Fire Department was established in 1942. The community grew and the Village of Edina became a city in 1961. In 1964, the Edina Fire Department transitioned from an all volunteer to a combination career and paid-on-call fire department. Today, Edina is a first-tier suburb of Minneapolis, Minnesota encompassing sixteen square miles and serving a residential population of approximately 47,000 people. With 31 full time fire fighters, twelve paid-on-call personnel and two administrative assistants, the EFD operates from two fire stations and responds to approximately 4,700 fire and rescue emergencies each year. Services the EFD provides include fire suppression, rescues and advanced life support transport with its staff, three-licensed ambulances and fire apparatus. The department also makes available statewide coverage for technical rescue incidents, which may include responding to trench, high angle, low angle, wide area search, confined space, water or ice rescues and structural collapse incidents throughout the State of Minnesota. Through agreements with the State of Minnesota emergency management division, the EFD may deploy to other states requesting assistance in technical rescue situations (Siems, 2010).

In addition to emergency response, the Edina Fire Department conducts commercial building inspections, plan reviews, fire investigations and public education within the city (Edina Fire Department, 2011). The Edina fire department states that its mission is, “To serve the community by protecting lives, property and the environment in
a safe, efficient and professional manner” (EFD, 2011). The Edina Fire Department is well recognized for delivering high quality and timely service to the residents, businesses, and citizens in Edina; it is also known as a progressive, professional department.

Besides being considered a residential community of affluence, the city of Edina is regarded as a premier retail and commercial district for the western Twin Cities metropolitan area. Edina is home to a major 390 bed hospital (Fairview Southdale Hospital, 2011), the first indoor shopping mall complex in the nation, and more than 5,500 businesses. The average transient daytime population is estimated to be in excess of 150,000, and Edina has what may be considered an “older community” with more than 58% of the residents aged forty years or more (Edina Minnesota, 2011).

Based upon its location, the City of Edina is susceptible to a variety of weather conditions that are unique to each season. According to the *City of Edina Emergency Management Plan* (2008), past experiences and a study of current conditions, the city of Edina should prepare for severe weather events that may include tornadoes, damaging high winds, lightning, floods, extremes of temperature (heat and cold), ice storms, blizzards and droughts. In addition, the *City of Edina Emergency Management Plan* (2008) indicates human made or technological disasters that may negatively impact the city include: pipeline breaks with product release (natural gas, petroleum); radiological release; transportation incidents (road, rail, air); chemical release; wide spread power outage; pandemic episodes; mass casualty or medical surge events; extensive fires and terroristic events to such as riots or civil disturbances.

The Edina Fire Department has responded to many of these types of incidents in the past, performing as well as they could under the circumstances. The department and
its personnel have responded to these events and treated them with the same regard as
every day incidents, sometimes overwhelming local resources quickly and providing a
“less than ideal” response (D. Bagley, personal communication, November 17, 2009). A
major weather event or man-made disaster coupled with the aging Edina population may
potentially strain the EFD beyond its available resources or response capabilities.

The Edina Fire Department has an opportunity to change the way it responds to
these types of major incidents. By implementing an emergency management planner
with fire department personnel, the EFD will be better prepared to identify, anticipate,
prepare for and respond to major emergency incidents and disasters affecting the city of
Edina (J. Long, personal communication, July 1, 2011). The Edina Fire Department will
be better able to obtain timely, pertinent information about a disastrous event and the
consequences created by the event, and will be better able to respond appropriately to the
situation.

This Applied Research Project (ARP) is related to the “Thinking Systematically”
(NFA, 2011, SM 3-IV) and “Politics and Public Policy” (NFA, 2011, SM 7-VI) units in
the National Fire Academy’s (NFA) Executive Leadership (EL) course. One of the
United States Fire Administration’s stated operational objectives is to promote within
communities a comprehensive, multi-hazard risk reduction plan (NFA, 2003, p. II-2). An
emergency management planner within the EFD would help to achieve this goal.

This ARP has personal significance to this researcher due to my own experiences
in disasters. I have experienced firsthand widespread community flooding and have
witnessed the effects of natural and human-made disasters as an emergency responder.
Having witnessed and experienced the negative effects disasters can have on individuals
and communities motivates this researcher to explore best practices in emergency management and disaster preparedness.

Literature Review

The author’s review of literature began at the Learning Resource Center (LRC) of the National Fire Academy in Emmitsburg, Maryland in May of 2011 while attending the Executive Fire Officer Program (EFOP) Executive Leadership course. Upon returning home, this author continued to conduct literature research from materials obtained through the Minnesota State Colleges and Universities Fire/EMS/Safety (MNSCU) Center located in St. Paul, Minnesota and the Emergency Management and Response – Information Sharing and Analysis Center (EMR-ISAC) located in Emmitsburg, Maryland. Additional literature research was conducted through the Carver County, Hennepin County and Minneapolis library systems. The Internet was also utilized to conduct research.

This researcher focused literature review on the findings of others regarding emergency management and descriptive research procedures. Finally, this literature examination concentrated on only applicable and timely information to answer the four research questions posed for this applied research project.

Literature review was organized and developed around the following four specific research questions:

1. What concepts, components, characteristics, and training would be part of an emergency management planner position?

2. How do other fire jurisdictions address their emergency management needs?
3. What emergency incidents and disasters are likely to impact the city of Edina, Minnesota?

4. Why is it important for the EFD to have an emergency management planner?

The first research question considers what concepts, components, characteristics, and training would be part of an emergency management planner position?

The concept of disaster management is not unique to recent times. Humans have been subject to the adverse effects of disasters since the dawn of their existence. On multiple occasions entire civilizations have been decimated by the impact of a natural disaster. Epidemics and pandemics, for instance, have been well documented by our ancestors and these events have repeatedly occurred through the centuries, each time resulting in a sizeable reduction of the world’s population. For example, the bubonic plague (black plague) pandemic accounted for a reduction of fifty percent of the population of Europe during the 14th century (Fagan, 2000). Theories suggest that many of history’s greatest civilizations, including the Mayans, the Norse, the Minoans, the Supe, and the Old Egyptian Empire, ultimately fell, in part, by the effects of natural disasters. In these cases, it was floods, famines, earthquakes, tsunamis, El Niño events, and other natural catastrophic disasters – rather than their human adversaries, which delivered their ultimate demise (Fagan, 2000).

Archeological studies have revealed that early individuals and societies faced considerable risk, and that these early inhabitants took measures to prepare for or reduce these risks – a form of early Emergency Management (EM) (Fagan, 2000).
The story of Noah’s Ark from the Bible’s Old Testament illustrates an example of early EM practices of warning, preparedness and mitigation (Emerton & Jooston, 1988). Further evidence embracing the concept of EM practices can be found as early as 3200 BC. For example, Covello & Mumpower (1985), suggest the Asipu, who resided in current day Iraq, used a process similar to modern day hazard risk management to offer several alternatives to community risks or dangers. Table One titled “Notable Disasters Throughout History” details the death toll caused by some historical disasters.

The concept of the importance in EM planning has not been lost with time however. Modern disastrous events impacting humans serve as reminders. Events such as the Indian ocean tsunami in December 2004 that killed over three-hundred thousand, the May 2008 cyclone Nargis in Burma that killed one hundred forty-six thousand, and the Sichuan earthquake in May 2008 that killed sixty-nine thousand and injured an estimated three hundred seventy-five thousand suggest that disasters are as likely today as in the past (McEntire, 2009).

### Table 1.

**Notable Disasters Throughout History**

<table>
<thead>
<tr>
<th>Event</th>
<th>Year</th>
<th>Number Killed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediterranean earthquake (Egypt and Syria)</td>
<td>1201</td>
<td>1,100,000</td>
</tr>
<tr>
<td>Shaanzi earthquake (China)</td>
<td>1556</td>
<td>830,000</td>
</tr>
<tr>
<td>Calcutta typhoon (India)</td>
<td>1737</td>
<td>300,000</td>
</tr>
<tr>
<td>Caribbean hurricane (Martinique, St. Eustatius, Barbados)</td>
<td>1780</td>
<td>22,000</td>
</tr>
<tr>
<td>Tamboro volcano (Indonesia)</td>
<td>1815</td>
<td>80,000</td>
</tr>
<tr>
<td>Influenza epidemic (world)</td>
<td>1917</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Yangtze River flood (China)</td>
<td>1931</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Famine (Russia)</td>
<td>1932</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Bangladesh cyclone (Bangladesh)</td>
<td>1970</td>
<td>300,000</td>
</tr>
<tr>
<td>Tangshan earthquake (China)</td>
<td>1976</td>
<td>655,000</td>
</tr>
</tbody>
</table>

*Source: St. Louis University, 1997; NBC News, 2004.*
The United States has also experienced disasters that caused great death and destruction. The great Galveston hurricane of 1900, a category four storm, resulted in an estimated eight to twelve thousand deaths (Rappanport, & Fernandez-Partagas, July, 1999). According to Blanchard (2006), the United States lost an estimated 675,000 lives to the influenza pandemic between September of 1918 and April of 1919.

More recently, in response to military threats to its citizens, President Truman of the United States established the Office of Civil Defense Planning (OCDP) in an effort to coordinate and direct federal, state and local civil defense programs and establish communication and warning systems; post-attack assistance; damage assessments; and planning for government continuity (National Archives, 2011). The OCDP was a predecessor to the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) that now coordinates and are the lead agencies for national EM activities (Homeland Security National Preparedness Task Force, 2006).

While the concept of EM dates back many thousands of years, the design of an “all-hazards” disaster and emergency management viewpoint is relatively new. Dr. B. Wayne Blanchard (2007) and a committee of EM leaders brought forward eight modern day principles to guide EM professionals. Dr. Blanchard is considered among peers to be a foremost leader in EM. According to Blanchard (2007) Emergency management must be:

1. Comprehensive – emergency managers consider and take into account all hazards, all phases, all stakeholders and all impacts relevant to disasters.
2. Progressive – emergency managers anticipate future disasters and take preventive and preparatory measures to build disaster-resistant and disaster resilient communities.

3. Risk-driven – emergency managers use sound risk management principles (hazard identification, risk analysis, and impact analysis) in assigning priorities and resources.

4. Integrated – emergency managers ensure unity of effort among all levels of government and all elements of a community.

5. Collaborative – emergency managers create and sustain broad and sincere relationships among individuals and organizations to encourage trust, advocate a team atmosphere, build consensus, and facilitate communication.

6. Coordinated – emergency managers synchronize the activities of all relevant stakeholders to achieve a common purpose.

7. Flexible – emergency managers use creative and innovative approaches in solving disaster challenges.

8. Professional – emergency managers value a science and knowledge-based approach based on education, training, experience, ethical practice, public stewardship and continuous improvement.

According to Blanchard (2007) these are the principles, or components required to establish a foundation upon which governmental agencies and private industry may develop an effective EM program. The National Fire Protection Association (NFPA) established standards on disaster/emergency management and business continuity in
To provide a framework fire personnel may use to develop EM planning strategies, some common criteria for EM program development include (NFPA, 2007):

1) Establishing leadership and direction for the program.

2) Hazard identification, risk assessment, impact analysis, and mitigation or prevention planning to include continuity planning and public education programs.

3) Development of emergency operations response and recovery plans by establishing operational procedures, defining facilities, establishing communications and warning systems and engaging resource management and logistical support through mutual aid and pre-placed contracts (A.4.1(3)).

These key program elements transcend the boundaries of prevention, mitigation, preparedness, response and recovery phases of incidents and should be incorporated in the EM plan of the community (NFPA, 2007, A.5.1.2). Burby, Deyle, Godschalk, & Olshansky (2000) stressed that EM planning must be integrated into the planning process of communities, to avoid isolation from other planning mechanisms. Kowalski (2011) adds that a critical incident stress component should be incorporated into an EM position. It is important to understand and prepare for added stress levels and the potential for Post Traumatic Stress Disorders (PTSD) following major incidents and disasters (Kowalski, 2011).

Dr. Ernest Vendrell (2001), states most experts today advocate a comprehensive “all hazards” approach to emergency preparedness and that comprehensive plans take into account potential natural, technological, and human-caused threats to communities with the purpose of saving lives, reducing property loss, protecting the environment and
lessening an organization’s liability potential. Burby et. al. (2000), supports this view adding, “an all hazards plan transcends all planning and work groups (public & private) in the community” (p. 58).


1. Defining an emergency in terms relevant to the organization doing the planning.
2. Establishing an organization with specific tasks to function immediately before, during and after an emergency.
3. Establishing a method for utilizing resources and for obtaining additional resources during and emergency.
4. Providing a recognizable means of moving from normal operations into and out of the emergency mode of operation.

Robert Easton (2008), EM director of Clinton Missouri, asserts the EM manager is a key leader in planning, a coordinator of operations, a community liaison, a supporter of mitigation efforts and a major proponent of training, planning and preparedness. These characteristics of an EM position are widely supported in literature (Blanchard, 2007; Burby et. al., 2000; Easton, 2008; Kowalski, 2011; Vendrell, 2001), and generally agreed upon to be the foundation of an effective EM program.

The International Association of Emergency Managers (IAEM) identifies training, formal education and professional development as integral elements of IAEM Certified Emergency Managers (CEM) (Bovyn, 2009). According to Bovyn (2009), in order to obtain IAEM CEM status, a candidate must have accumulated three years of EM
experience, received a baccalaureate degree in any subject area, recorded one-hundred hours in EM training, contributed at least six separate times to the profession (speaking, published articles, volunteer boards, committees and other areas beyond the scope of the EM job requirements), demonstrate specific knowledge’s, skills, and abilities (KSA) through a comprehensive EM essay, pass a one-hundred multiple choice EM examination within the specified two hour time block, and provide three references (including one from the candidate’s current supervisor).

According to FEMA (May 23, 2011), there are specific KSA requirements to function as an effective Emergency Manager. The Emergency Management Institute (EMI), a branch of the FEMA program, offers self-paced courses designed for people who have emergency management responsibilities; courses focus on nine mission areas identified in the national preparedness goal. These include:

1. Incident management
2. Operational planning
3. Disaster logistics
4. Emergency communications
5. Service to disaster victims
6. Continuity programs
7. Public disaster communications
8. Integrated preparedness

FEMA has recognized IAEM as the standard for obtaining a CEM designation (Blanchard, 2007; FEMA, 2011).
Many states recognize the importance of EM and offer their own CEM status. Each state has varying requirements for achieving this CEM status. The state of Minnesota, through the department of Homeland Security and Emergency Management (HSEM), offers a CEM program built upon FEMA independent study courses, classroom education, professional development and capstone seminars. A document titled “MN Homeland Security and Emergency Management Professional Certification Training Check List (2010-2011)” outlines the requirements to become a Minnesota CEM and is included as Appendix A of this research. Approximately 256 hours of classroom and hands-on training are required to obtain Minnesota CEM accreditation (HSEM, 2011).

The second research question examines how other fire jurisdictions address their emergency management needs.

Drabeck & Hoetmer (1991) state the missions, objectives and goals of emergency management often align with those of the fire service. EM is noticeably incorporated in the fire service. Japan, for example, has a highly integrated EM branch in the fire service (FDMA, 2011, Chapter 3). According to Japan’s Fire and Disaster Management Agency (FDMA), Japan’s fire services and emergency disaster preparedness began at the local municipal level with functions closely linked to communities. The FDMA has played a vital role in ensuring the safety and security of the public of Japan. According to FDMA documents, the Fire and Disaster Management Agency will expend all efforts to fulfill its responsibilities in enhancing the current municipality-based fire and disaster prevention system (FDMA, 2011). Japan’s FDMA assumes a coordinating role to prevent and
minimize damage caused during disasters by ensuring a swift and active response to
national emergencies that cannot be contained by regional volunteer fire corps (FDMA, 2011). The tasks of fire services in Japan include the protection of lives, physical being and property of the public and taking precautions against disasters, mitigating the damages after disasters, and the appropriate transport of persons who have sustained injuries due to a disaster (FDMA, Tasks of Fire Services, 2011).

On March 11, 2011 at 2:46 pm a 9.0 magnitude earthquake occurred in the western Pacific Ocean approximately 45 miles east of Sendai Japan. The resulting tsunami and aftershocks killed 15,281, injured another 5,363 and left 8,492 unaccounted for (“2011 Tōhoku earthquake and tsunami”, 2011). Additionally, reactors at the Fukushima and Onagawa nuclear power stations were shut down and back-up emergency power generators failed, disabling critical cooling systems. The cooling system’s failure allowed six reactors to overheat and produce a partial melt down of the reactor cores and release radioactive isotopes into the atmosphere (“2011 Tōhoku earthquake and tsunami”, 2011). Japan’s government activated the FDMA, and is credited with saving numerous lives and decreasing the overall damaging effects of this natural disaster through their coordination and rescue efforts (Natural Disaster Report, March 30, 2011).

Additionally the Chinese government has implemented many efforts to establish a modern EM system. Yan Zhao (n.d.) asserts that unlike the United States, China does not have a national EM department. Rather China has decentralized a large part of EM to the local level and established two separate departments. According to Zhao (n.d.) the two main departments responsible for EM in China are the National Civil Defense (CD) and the Emergency Management Office (EMO). The CD is responsible for aerial defense,
Chemical, Biological, Radiological, and Nuclear (CBRN), and Hazardous Materials (HAZ MAT) releases. The EMO is responsible for emergency planning, natural disasters, technological accidents, public sanitation issues, social security issues and recovery activities. Zhao (n.d.) states that local fire departments with their version of EM planners are responsible for EM preparedness within their own response areas and can handle most incidents (p.2).

The United States Fire Administration released a special report titled “Fire Department Preparedness for Extreme Weather Emergencies and Natural Disasters” (Sensenig & Stambaugh, April, 2008). In this report, it recognized that when natural disasters strike, “the public relies heavily on first responders, and the more substantial the incident or disaster, the greater the need for assistance delivered by the fire department” (p. 1). The report states, “most fire departments have been through…natural disasters at some point” and addresses the types of service calls fire service personnel are most likely to occur as a result of these disasters (p.1). The USFA special report provides information and advice, through advanced planning, fire departments can use towards enhancing their own level of preparedness to ensure greater safety and operational efficiency the next time disaster strikes (p.1-2).

The mandate for emergency management is “to protect lives and property from the effects of natural and technological disasters and enemy attack,” and begins with the President of the United States. At the federal level, “emergency management is administered by the Federal Emergency Management Agency” (FEMA) (Minnetonka, emergency management, 2011).
In the United States, FEMA coordinates the federal government's role in disasters. FEMA can trace its beginnings to the Congressional Act of 1803, generally considered the first federal disaster declaration (Cole, D., Ewall, P., & Ferguson, S., 1993). Paul Peluso (2010) believes FEMA has firmly had its finger on the pulse of the fire service for years and works, in unison, with fire service personnel to mitigate the effects of disasters through training, grants, and assistance following these events (p. 14).

In Minnesota, the governor working through the Minnesota Department of Public Safety, Division of Homeland Security and Emergency Management (HSEM), is responsible for maintaining an effective emergency management program throughout the state. This includes monitoring county and municipal emergency management programs to ensure compliance with federal and state regulations and statutes (Minnetonka, emergency management, 2011).

The state of Minnesota offers state level EM guidance and support for local fire departments. Through the Minnesota State Duty Officer program (duty officer), a division of HSEM, community fire departments have access to operational resources that are typically not supported at the local level such as hazardous materials teams, structural collapse/technical rescue teams, bomb mitigation squads and the Minnesota National Guard. The duty officer can also facilitate the response of the 55th Civil Support team, a detachment of the Minnesota National Guard, whose response capabilities include weapons of mass destruction including nuclear, biological, radiological, toxic or poisonous gas release that could result in a catastrophic loss of life or property. Through a single call to the duty officer, local fire personnel have access to emergency response teams, the Fire chief Assistance Support Team (FAST), Incident Management Teams
(IMT), and Community Emergency Response Teams (CERT). Additional resources provided by the state duty officer program include access to the state’s Emergency Operations Center (EOC). The state EOC includes members of the Emergency Management Assistance Compact (EMAC) that allows states and territories to assist one another with personnel and equipment during declared emergencies (HSEM, EMAC, 2011).

At the city level, the emergency management director is typically a chief level officer with specialized training, skills and abilities. This person is responsible for developing disaster response capabilities and coordinating the development of an emergency response plan for the jurisdiction (Minnetonka, emergency management, 2011).

Edina, Minnesota is shares its boarders with seven cities ranging in population from 17,000 to 373,000 people (U.S. Census Bureau, 1996). These cities are Minneapolis – a class one city and the state’s most populated metropolis, Saint Louis Park; Hopkins; Minnetonka; Eden Prairie; Bloomington and Richfield. Each of these surrounding cities approach EM differently resulting in varying involvement in EM by their respective fire service personnel.

According to the city of Minneapolis (Minneapolis Emergency Preparedness, 2011), the health and safety of Minneapolis residents is a top priority. The city’s web site states, “Emergency preparedness requires strong partnerships with other local, state and federal agencies” (2011). The city of Minneapolis manages their EM needs through the city department regulatory services and emergency preparedness (Minneapolis Emergency Preparedness, 2011). However, it is interesting to note that the last two
former Minneapolis fire chiefs, Mr. Rocco Forte and Ms. Bonnie Bleskachek, transitioned from chief of the fire department to playing an integral role in Minneapolis’ EM (J. Berg, personal communication, May 23, 2011). This observation from Mr. J. Berg is supported by the preparedness practicum of 2011 document that identifies Mr. Forte as EM director and Ms. Bleskachek as a faculty member of the Minneapolis fire and emergency preparedness team (Preparedness Practicum, 2011). The current Minneapolis fire chief, Mr. Alex Jackson, is an active member of many state EM committees and work groups through the Minnesota State Fire Chiefs Association (MFSCA, 2010).

The city of Saint Louis Park, Minnesota states that one of their fire departments responsibilities is that of emergency preparedness (St. Louis Park, 2011, June 7). The fire department is also tasked with “severe weather mitigation” according to the fire departments web site. The chief of the fire department, Mr. Luke Stemmer, is recognized as the principle emergency manager and holds the title of President of the Metropolitan Emergency Managers Association (MEMA, 2009). On May 22nd 2011 a tornado was reported to have touched down in St. Louis Park at approximately 2:15 pm. The tornado produced winds of 100 -110 miles per hour, had a path length of 14 ¼ miles and was about ½ mile wide according to the National Weather Service Twin Cities office (NWS, 2011, May 22). This tornado killed two people and hospitalized at least forty-seven injured by the storm. More than 6000 structures were destroyed or damaged and according to Chief L. Stemmer (personal communication, 2001, May 29) who oversaw EM operations for Saint Louis Park. Some of the challenges included collapsed structures, multiple hazardous material releases, overturned rail cars, and multi-casualty
incidents requiring coordination of local mutual aid, regional, state and federal resources (L. Stemmer, personal communication, May 29, 2011).

The Hopkins Fire Department (HFD) has taken pride in a commitment to professional service by maintaining their skills, knowledge and abilities according to their web site (Hopkins, 2011). Organized in 1893 after a devastating fire brought to light the need for public fire protection, the HFD services now includes fire prevention, fire suppression, medical response and EM oversight which includes the formation and administration of a Community Emergency Response Team (CERT) (Hopkins, 2011, CERT). Additionally, HFD supports a state wide hazardous material chemical assessment team that provides emergency response for assessment of chemical hazards for the State of Minnesota and maintenance of state owned equipment for emergency response and training of personnel. (Hopkins, 2010, budget). To date the city of Hopkins has experienced damages from severe storms, public health emergencies, flooding and massive fires with the most recent being a substantial strip mall fire that required the assistance from eight different cities and caused economic setbacks for the city, its residents and the malls tenants and owners (P. Sandon, personal communications, June 10, 2011).

According to the City of Minnetonka (Minnetonka, emergency management, 2011), “the city of Minnetonka is subject to major emergencies and/or disasters that may pose a significant threat to public health and/or safety” and may involve, natural causes such as tornadoes, winter storms, and hail, technological disasters such as a hazardous materials release, civil disturbances like riots or protests and national security events similar to domestic and international terrorism acts.
To prepare for these varied threats, three federal- and state-certified emergency managers, all of whom are recognized locally as leaders in the field, form the city’s emergency management department within the Minnetonka Fire Department. Together, they keep the city’s emergency preparedness at a level unmatched by other municipalities (Minnetonka, emergency management, 2011). The fire chief, Mr. Joe Wallin, assistant fire chief, Mr. Jim Flanders, and deputy fire chief, Mr. Kevin Fox are responsible for the maintenance of Minnetonka’s emergency response plan. Minnetonka's plan is so comprehensive that it is often used by other training agencies as an example of how to put a plan together. According to Minnetonka’s website, the city's plan is reviewed annually, on a four-year cycle by the city, the county, the state, and the federal government to ensure the plan is a workable, living document that meets critical criteria laid out by these governments (Minnetonka, emergency management, 2011).

The city of Eden Prairie shares a portion of its borders with Edina. The Eden Prairie Fire Department operates four fire stations with a staff of 95 paid on-call firefighters and nine full-time firefighters. To help promote safety and fire prevention in the community, the Eden Prairie Fire Department educates businesses and residents with ongoing safety programs, such as the HeartSafe© Eden Prairie automatic external defibrillator (AED) campaign and its citywide fire inspection initiative. The city, through the fire department, also maintains an emergency operations plan that encompasses an all-hazard approach to emergency planning (Eden Prairie, emergency preparedness, 2011). Throughout the years, the plan has been used in response to natural disasters such as tornadoes, floods and ice storms. The plan has also been applied in man-made disasters such as hazardous materials spills and transportation accidents (Eden Prairie, emergency preparedness, 2011).
preparedness, 2011). According to documents (Eden Prairie, emergency preparedness, 2011; Minnetonka, 2011, MEMA, 2009), the city of Eden Prairie has CERT capabilities with a one-hundred member force whose “members must work with the Eden Prairie firefighters to learn about disaster preparedness.” Mr. George Espensen is the Eden Prairie fire chief and city EM director. He employs two assistant fire chiefs that also have attained their EM certifications through the state of Minnesota and work to keep the cities EM planning process current and effective.

Bloomington Minnesota has one of the largest volunteer fire departments in the country with 150 firefighters (Bloomington, Minnesota, 2011). Disaster response planning and coordination of city departments during a disaster are the responsibility of the emergency management unit located in the police department (Bloomington, emergency management, n.d.). Additionally the public health department of Bloomington provides informational guidance to citizens and business owners on emergency preparedness topics such as natural disasters, a bioterrorism event or an infectious disease outbreak. The public health division also manages Bloomington’s CERT members according to their web site (Bloomington, emergency management, 2011). The police and public health department’s work with the fire department in training and preparation for disastrous events in Bloomington according to assistant fire chief Jay Forster (personal communication, May 14, 2011).

The city of Richfield Minnesota fire department is trained and has the equipment to handle a variety of situations, including technological and natural disasters (Devich, S., n.d.). According to Richfield’s web site accessed on June 10, 2011, (Devich, CERT, n.d.), the Department of Public Safety, which encompasses the police and fire
department, has partnered with their neighbors in Bloomington, Minnesota to create and maintain a CERT that can be utilized in the event of natural or other disasters. One of the stated goals of the Richfield CERT is to make “disaster resistant communities” that can return the vitality and robustness to their area following a disaster (Devich, n.d.). This commitment to resiliency was demonstrated when the Richfield fire department and CERT aided residents, small business proprietors and the city of Minneapolis on March 17, 2011 after a large high pressure natural gas line ruptured and exploded in Minneapolis shooting flames several stories into the air, forcing the evacuation of businesses and homes and bringing traffic to a standstill on major highways. Mirah Ammal, an eyewitness to the event, was quoted "The firefighters were running down the street and banging on doors and evacuating businesses and residents” as recorded by McKinney & Smetanka (2011, March 20).

In an effort to more adequately answer the research question of how other fire jurisdictions address their emergency management needs, the author also examined select fire authorities outside of the immediate area. A sampling of both larger and smaller EM programs was obtained to identify common best practices in fire based EM programs.

The Los Angeles fire department (LAFD) appears well prepared for a disaster to strike. In Los Angeles, there are more than four million people in the city every day, whether they're residents or visitors. The diverse nature of the city, not to mention more than 470 square miles of geography, make for a high risk situation in the event of a major disaster (LAFD, 2011). To date, the LAFD has experienced natural disasters including major earthquakes, and civil disturbances, such as the riot in 1992 whose toll was recorded as the worst civil unrest LA had experienced since 1965: more than 50 killed,
over 4 thousand injured, 12,000 people arrested, and $1 billion in property damage (Delk, 1995). To ensure that the population has the best possible chance of surviving a disaster – and thriving afterward – the LAFD supports and trains residents to be disaster first responders (LAFD, 2010). The Community Emergency Response Team (CERT) concept was developed and implemented by the City of Los Angeles Fire Department in 1985. They recognized that training citizens in basic disaster survival and rescue skills would greatly improve the ability of citizens to survive until first responders or other assistance could arrive (Luna, 2011).

This training proved to be so beneficial that The Federal Emergency Management Agency (FEMA) believed that the concept and the program should be made available to communities nationwide. In 1994 the Emergency Management Institute, a division of FEMA, expanded the CERT format to make it applicable to all hazards. In 2003 President Bush asked all Americans to volunteer in the service of their country, suggesting joining local CERT’s.

As part of their efforts to prepare its citizens, the LAFD has prepared a booklet that encourages its residents to “prepare for a major disaster and to maintain that readiness...(your) quality of life and the potential for survival are greatly increased by being prepared.” (LAFD, 2011). The LAFD supports CERT organizations and other volunteer organizations assisting in disasters (VOADs) by providing training, equipment, expertise and cooperation (LAFD, 2010). The ultimate goal of the LAFD is to enable citizens to become more self sufficient during disasters because history proves time and time again that the local recourses (police, fire, ambulance, electric, water, gas etc.) may be taxed beyond reasonable response times and capabilities. Despite LAFD’s
preparedness successes, they still advise individuals to be prepared. As Joe Campanella stated;

Most people think that during a disaster, if they call 911, emergency response personnel will show up, or they assume that they can drive down to the local hospital and check in. Here is a reality check from the Los Angeles Fire Department: We are not coming for at least three to five days, and maybe more, if we have a large enough disaster (Campanella, 2011, May 25).

As citizen participant Helga Gendell pointed out “Emergency preparedness has no end goal or finish line, rather it is an ever evolving transitional state of readiness to react and overcome major catastrophes and thrive in our communities” (Campanella, 2011, May 25).

Rochester, Minnesota is home and headquarters to the world famous Mayo clinic and five accompanying hospitals: Saint Mary’s, Generose, Methodist, Olmsted Medical Center and the Federal Medical Center (Rochester-Olmsted, 2009, p. 53). It also hosts a campus for the University of Minnesota and has a federal medical center for prisoners (City of Rochester, 2011). The fire department retains control and responsibility for EM and works closely with county and federal officials to protect the community and residents from disasters. Rochester Fire prides itself in providing the best possible service to the citizens of Rochester and to the visitors that pass through their community (City of Rochester, 2011). Rochester Fire Department literature states, “we are here to serve when called upon and be ‘the hand to reach for’ when lives are in danger and people are having the worst day of their lives” (City of Rochester, 2011). The city of Rochester has developed a comprehensive EM plan based upon an all-hazards approach
in accordance with the state and federal requirements set forth in Section 104 of the Disaster Mitigation Act of 2000 (DMA, 2000); Public Law 106-390, codified at 42 USC Sections 5121 et seq. Hazard Mitigation Planning 44 CFR Part 201 that establishes criteria for State and local hazard mitigation planning as authorized by DMA 2000 (Rochester-Olmsted, 2009, p. 6). Part of the plan includes development of a CERT unit. J. Luna (2011) states, “The success of the CERT program in the City of Rochester has been noted by FEMA and the Rochester Fire Department was instrumental in rewriting the (CERT) course curriculum that is now taught nationwide.” The Rochester Fire Department has a dedicated EM position responsible for development, implementation and ongoing evaluation of the cities EM plan (City of Rochester, 2011).

On May 22, 2011 the city of Joplin, Missouri was devastated by a massive tornado that killed 153 people (Hanna, 2011, June 14). According to an eyewitness, this tornado was on the ground for 70 minutes, was one mile wide and received an EF-4 (Enhanced Fujita) damage rating with wind speeds in excess of 200 miles per hour. “It was pretty incredible, the power of nature. From clear blue skies to damaging tornado in 20 minutes”, says an eyewitness to the event (K.J. Kitka, personal communication, June 2, 2011). Kitka stated, “It was like a bomb went off…rendering it completely dark and eerie…I had seen enough of my first tornado” (personal communication, June 2, 2011).

Unfortunately the Joplin, MO fire department was ill prepared for the devastation caused by this event. Keith Stammer, EM director for the Joplin fire department said the scope of the destruction was making it difficult to account for people affected by the storm. He said, "There's a lot of confusion, a lot of inability for folks to communicate" (Stammer, 2011) as recorded by The Washington Times on June 16th, 2011.
According to the city of Joplin, MO (Joplin, 2011), the Joplin Fire Department serves an area of approximately 50 square miles and a daytime population of 300,000. The Department is divided into five divisions with a Chief Officer heading administration, operations, prevention, training and emergency management. Mr. Keith Stammer leads the EM division and is responsible for all aspects of the all-hazard emergency operations plan (retrieved June 16, 2011). Joplin Fire Department did acknowledge a number of successes attributed to their EM planning efforts. Joplin Fire Chief Mitch Randles stated, “because we had a comprehensive, all-hazards emergency [management] plan in place, we were able to quickly respond and evacuate the nine story hospital in an hour and one-half, including those considered to be in critical condition” (ABC News video, May 23, 2011).

The third question explored by this researcher investigates what emergency incidents and disasters are likely to impact the City of Edina, Minnesota?

According to the City of Edina Emergency Management Plan (2008) as cited in Siems (2010), the city of Edina is at risk for severe weather events that may include: tornados, damaging high winds, lightning, floods, extremes of temperature (heat and cold), ice storms, blizzards and droughts. In addition, the City of Edina Emergency Management Plan (2008) indicates man made or technological disasters that may negatively impact the city include: pipeline breaks with product release (natural gas, petroleum); radiological releases; transportation accidents (road, rail, air); hazardous material chemical releases; wide spread power outage; pandemic public health episodes; extensive fires and terroristic events such as riots or civil disturbances. The plan identifies 48 active hazardous materials facilities within the Edina city limits, one 390-
bed acute care hospital, one major indoor shopping mall, multiple smaller indoor shopping malls, 11 public schools, two underground pipelines, one railway, and four major highway transportation routes. Portions of the city of Edina are within flood plains and have a “high probability” of submerging. The city is also located under the flight paths of one international airport, one regional airport, and numerous helicopters fly within Edina’s airspace each day (City of Edina Emergency Management Plan, 2008).

Analysis of additional data provided by the National Climate Data Center (2009) indicates that in Hennepin County, inclusive of Edina, from January 1, 1950 through August 31, 2009, there have been a total of 766 events classified as major weather events – not including major winter storms – resulting in 29 deaths, 279 injuries and an estimated property loss in excess of $1.038 billion dollars.

The National Weather Service’s State Climatology Office (NWS, 2009) identified 1,059 deaths related to winter storms with an average of 33 deaths per year in Minnesota.

The NWS (2009) also states that Minnesota is situated in a region of maximum tornado occurrences in the United States commonly referred to as Tornado alley. Hennepin County has experienced tornados in every month from March to November, with three-quarters of all tornados occurring in the months of May (16%), June (33%) and July (27%) (NWS, 2009). In June 1987 the National Weather Service (2009) recorded a tornado that traveled through the city of Edina causing a reported 58 injuries and an estimated one million dollars worth of property damage. According to the NWS (2009), there have been 6,754 deaths resulting from 1,371 tornados or high winds from 1940 to 2008 in Minnesota (as cited in Siems, 2010).
The *City of Edina Emergency Management Plan* (2008) indicates flash floods and high water conditions are occurrences the City of Edina must also address. The NWS (2009) attributed an average of 65 deaths per year to flooding and high waters in Minnesota including one in Edina in 2004.

In light of all the possible emergencies, Edina must clearly be prepared to act quickly. A closer look at a 1991 winter storm that left the city incapacitated to adequately respond for over seventy-two hours was recalled by senior members of the Edina Fire Department. Joe Struzyk, a paramedic and firefighter of over twenty-three years with EFD, recalls the blizzard that dropped more than three feet of snow, killed 22 people and injured more than 100 on October 31, 1991. J. Struzyk (personal communication, December 29, 2009) concluded that the fire department was stretched beyond its limits. J. Struzyk (personal communication, December 29, 2009) stated that:

We had to create unique ways of transporting patients and accessing areas due the huge snowfalls. Stranded vehicles blocked roadways and our normal means of access or egress; mounds of snow and an inability to distinguish where the road ended and the ditches began. We ended up using the bucket of a front-end loader as a patient transport vehicle.

Struzyk continues by commenting “…many areas of the city were totally inaccessible to us [fire department] for about three days.

Bob Lawson (personal communication, December 14, 2009) indicated that the Edina Fire Department has been taxed on many occasions from disasters ranging from flooding, to blizzards, to heat waves, to major fires. For example, Lawson recalled on October 31, 2001, when a large apartment complex caught fire in the area of 70th street
and Highway 100. This resulted in a partial collapse of the structure while firefighters were still inside, and personal injury. This single fire event taxed the resources of the City of Edina beyond its capacity, and severely strained mutual aid fire companies from Hennepin and Carver counties. The Edina Fire Department remained on scene for three days extinguishing fires and protecting the environment from hazardous run off.

According to reports (Lonetree & Miller, 2010), a house exploded and another was severely damaged in Edina on February 23, 2010 after a contractor for a cable company severed a large, high-pressured underground natural gas main in the 50th and Arden Avenue area of Edina. Lonetree & Miller (2010) reported officials evacuated a large swath of homes in the area and blocked off busy neighborhood streets for hours after the incident. Two people were injured and approximately one quarter of the city needed to be evacuated after high levels of natural gas were recorded traveling throughout the storm drainage system causing concern for additional explosions (Shenoy, 2010). This incident tied up police and fire crews from Edina and surrounding cities for several hours and “rush hour traffic ground to a halt as drivers encountered roads that police abruptly blocked off” (Shenoy, 2010). Fire Chief Marty Scheerer stated, “after the blast, families from the area gathered at a neighborhood shelter [located] at the Edina Country Club until alternate housing could be arranged” (as documented by Lonetree & Miller, 2010).

Natural disasters also impact and affect Edina. On April 26, 1984 a tornado struck near Edina Minnesota. Flying debris reportedly killed one person and an additional 52 people were injured in the springtime storm according to National Weather Service records (2005). The damage estimate was in the millions of dollars with
approximately 300 residences and 90 other structures damaged or destroyed (NWS, 2005).

In addition to natural disasters and major fires, the City of Edina has also experienced civil unrest. ATK, a premier aerospace and defense company, keeps corporate offices in Edina. According to Jeff Long, Chief of Police for the City of Edina, the Edina Police have responded on numerous occasions to quell protests and civil unrest demonstrations against ATK’s policies and actions. Long reports that many of these protests resulted in mass arrests that depleted the departments’ ability to respond to other calls for service (personal communication, June 29, 2011). Additionally, some of these protests resulted in physical damage and personal injury to police officers, further depleting their response capacity. The City of Edina retains a team of highly trained police officers and paramedics capable of responding to events requiring a heightened level of police action, such as hostage or barricaded subjects; high risk warrants; suicidal persons; civil disturbances; personal protection of dignitaries and disaster response (Edina Police, 2009, ERT). This highly trained team will also respond to other communities or jurisdictions if requested. Chief Long informed the author (personal communication, June 29, 2011) that when this team is activated, due to its intense staffing demands, it tends to place significant stress on the city to adequately provide law enforcement coverage for the rest of the community.

Because has Edina an unusually high percentile of vulnerable population groups, it is also at higher risk for disastrous outcomes from adverse events. According to a hazards assessment conducted in 2008 (City of Edina Emergency Management Plan, 2008), Edina’s population of 45+ will notably increase by the year 2030 as a result of
aging baby boomers. Housing needs for this aging population are often accomplished through adult day cares, senior care centers, barrier-free assisted living projects, and nursing home facilities with mostly single and dual occupant rooming units. Additional concern should be given to a high number of infirmed or special needs population in the Fairview Southdale hospital setting (FSH, 2011). Finally, the distribution of youth (newborn to eighteen year old) for at least three-quarters of the year and half of each day is altered by the institutional assembly into schools and childcare centers. This could potentially lend to an increased demand on EM planning and emergency response due to “cascading” should a precipitating major event such as a fire, weather or a pandemic event occur (Rochester-Olmstead, 2009). Edina has a relatively small percentage of non-English speaking population. However, this is important to note due to the need to communicate and alert this group to emergencies resulting in a higher safety risk for this population that cannot understand the prevailing language.

Literature review, historical documents and personal communications have shown that the city of Edina has experienced many types emergency incidents and disasters. If history is an indicator of possible future events, then Edina is likely to again experience similar events that will impact the city.

The fourth question queried by this researcher asks why is it important for EFD to have an emergency management planner?

Disaster planning is especially important by a fire department because most Americans have not taken the proper steps to prepare themselves for catastrophic events. An article USA TODAY reported,
Most Americans haven't taken steps to prepare for a natural disaster, terrorist attack or other emergency, according to a new study on preparedness, and only about a third have made plans with family members about how they would communicate with each other during a crisis (Hall, 2006, p.1).

It is a well-known fact that fire departments, no matter what service delivery type, often are first to respond to disasters in their community. The International Association of Fire Chiefs (IAFC) (2002) recognizes that local fire departments are the first responders to the national or human-caused catastrophic events (p. 9). Because of this, fire departments must be involved in every aspect of community emergency planning (United States Environmental Protection Agency, 1988). Former FEMA Director James Lee Witt (1996) states that no matter what the disaster, large or small, communities will turn to the local fire department and expects them to know how to handle the situation.

In their white paper, disaster preparedness experts Matsubara & Urashima (2005) discuss how disaster preparedness has evolved from the fire service:

- Fire protection and disaster management began with firefighting activities and response to fires after they broke out, later expanding to include areas such as fire prevention, response to hazardous materials accidents, first aid and rescue activities response to natural disasters such as earthquakes, response to nuclear power accidents, and so on (p. 76).

- One of the most important tasks that a fire service performs is disaster planning, since a fire department is basically a disaster control agency (Bahme & Kramer, 1996). *On Scene* (1994) supports this opinion: “a significant number of fire service leaders and
professionals – almost 70 percent – are their communities emergency managers” (as cited by Shaw, 1999).

Disaster events often create circumstances and cascading events comparable to those created by fires (Matsubara & Urashima, 2005; Shaw, 1999). Bahme & Kramer (1992) also found many similarities when comparing disaster conditions with fire situations handled on a daily basis by fire departments. Similarities include the need for immediate response, utilization of a strong incident command presence, large personnel requirements, the use of inter-agency mutual aid, pre-incident planning, and that fires and disasters both are components fulfilling fire department missions. Regardless of the cause, disasters can, and often do, inflict similar challenges and service demands for which fire agencies are well prepared. Crichlow (1997) asserts that a flattened structure requires a similar response regardless if the reason is from a tornado, a fire, an earthquake, a bombing, or a natural gas explosion.

According to Shaw (1999), one could infer that due to the similarities, fire departments are best situated to handle and prepare for disasters. To be well prepared takes proper planning, which is accomplished by an effective fire service EM planner.

Shields (1996) defined emergency planning as a process that includes three separate components: identification and analysis of the potential hazards and mitigation of their consequences (Emergency Planning). The fire service has already been accomplishing these components for many years through pre-planning, and supporting legislation that regulates hazardous conditions (Shaw, 1999). Sizani (n.d.), concurs stating, “every municipality must have a disaster management plan” adding, “disaster
management and planning is a key part of government work” and “A very important way of preventing fire disasters is to have a good disaster plan in place.”

Beginning before 1970, the City of Edina has recognized the importance of EM and the importance of fire protection. Back then EM was classified as civil defense. The Edina city code Section 505 - Civil Defense and Emergency Regulations (Edina city code, 2011) – allows for the mayor of Edina to establish a civil defense agency, under the supervision and control of a Director of Civil Defense. The Director is appointed by the Mayor for an indefinite term and may be removed by the Mayor at any time (Edina city code, 2011, 505.03). This city code also gives broad powers and duties to the civil defense director to “organize, recruit, and train auxiliary police, auxiliary firefighters, emergency medical personnel, and any other personnel that may be required on a volunteer basis to carry out the civil defense plans of the City and the State” (Edina city code, 2011, 505.04 Subd. 4). It further allows the director during times of a civil defense emergency to require any person, except members of the federal or state military forces and officers of the State or any other political subdivision, to perform services for civil defense purposes. The director may also commandeer any motor vehicle, tools, appliances or any other property for mitigation or life safety rescue efforts (Edina city code, 2011, 505.04 Subd. 8).

The author was not able to locate any documents that identify a currently designated civil defense director for the city of Edina. Debra Mangen, Edina City Clerk, confirmed that the city does not presently have a civil defense director as allowed by city code 505 (personal communication, June 8, 2011). Finally, in the last twenty years no documents could be located to show compensation to any individual for services rendered
as Edina’s civil defense director. Ms. Mangen (personal communication, June 8, 2011), substantiated that no records were available to show compensation of a civil defense director in Edina, MN. Chrichlow (1997) states that municipalities with no functioning emergency manager or civil defense director implicitly choose improvisation as their Emergency Management strategy. This may bear some truth for Edina. Firefighter and paramedic Bob Lawson stated, “The (fire) department has been taxed on many occasions from disasters ranging from flooding, to blizzards, to heat waves, to major fires. There have been times when we (fire department) have lowered our standards of service during extreme call volumes” (personal communication, May 19, 2011).

The City of Edina does have an emergency operation plan to ensure the protection of the public from disasters; it is administered by Police Chief Jeff Long and coordinated through Lieutenant Mike Nibbe of the Edina police department (City of Edina Emergency Management Plan, 2008). The stated purpose of this plan is to “ensure the effective, coordinated use of its resources to maximize the protection of life and property, ensure the continuity of government, sustain survivors and repair essential facilities and utilities” (EPD, 2011).

The Edina EM plan assigns specific persons or departments responsibility for areas of expertise. For example, operational planning is directed by the police department, communications by dispatch, hazardous materials mitigation is the responsibility of the fire department and debris removal is assigned to the public works director (City of Edina Emergency Management Plan, 2008).

However, during an emergency, there is little time to specify the ground rules for interagency cooperation. Consequently, many emergency managers have agreed to
implement a prearranged structure that effectively manages any conceivable type of
dangerous situation and includes structured guidelines for incident management (Price,
2004, p.2). Documents indicate the EFD should be well situated to succeed at EM
planning duties for the city since they already accomplish many of these same tasks in
their day-to-day operations (City of Edina Emergency Management Plan, 2008; EFD,

Incident management is well entrained in the U.S. fire service, dating back to the
early 1970s when FIRESCOPE (FIre RESources of California Organized for Potential
Emergencies) was developed for handling large and complex incidents (Mike Price,
2004, p.1). In March of 2004, the National Incident Management System (NIMS) was
born with adoption of the FIRESCOPE practices by the Department of Homeland
Security (DHS) (Price, 2004, p.1). The NFPA also accepted NIMS in 2002 as NFPA

Unfortunately, many police departments have not embraced incident
management. Some responses obtained by Stigler (2009) and cited in Bauer (2009) noted
law enforcements lack of acceptance of incident management principles: “Municipal
police departments do not want NIMS, won’t use it and don’t want to learn it.” He stated,
“Adoption is widespread, implementation is not… law enforcement does not use Incident
Command [because] an informal system is in place, just not verbalized” (pp. 82-84).
Edina police chief Jeff Long concurs, stating that “You guys [fire personnel] use this
[incident management] every day in just about every call you go on. We [police
personnel] usually handle our calls with one patrol officer” (personal communication,
June 14, 2011).
Operational planning is another important component of an effective EM plan (FEMA, 2004). One thing to remember is emergency plans must be operational. they need to be able to function in an organizations daily operations and be implementable by the responders on scene (EMS best practices, 2009). The fire service utilizes the same operational plan for daily and large-scale events. “For many fire departments, operational planning is where it's at, where it's been, and where it will always be” (Operational planning, n.d.). An operational plan is intended to provide a framework for dealing with emergencies to minimize the effects of such events (Emergency Management Institute, 1995). The EFD has established standard operating procedures (SOP) to address most events they are likely to encounter including events caused by natural disasters. (EFD, 2007, Storms and severe weather S.O.P.).

Disaster logistics is the process of planning, preparing, implementing and evaluating all logistical functions that support an operation or activity in a unified manner to reduce costs, ensure appropriate support, decrease delivery time, and establish movement, distribution and tracking of resources (FEMA, 1999, Logistics management support annex). The EFD is already performing and fulfilling many of these tasks within their day-to-day operations and emergency response agreements (EFD, 2007, Storm and severe weather S.O.P.; EFD, 2011, Mission statement).

The EFD leverages advanced communications through the use of a new-generation 800 MHz radio system designed to offer full compliance with the interoperable Project-25 standard enabling different departments, jurisdictions and agencies to talk to each other (USFA-TR-166, 2007). This USFA technical report highlights the effectiveness of the Allied Radio Matrix for Emergency Response
(ARMER) system utilized by emergency responders and the “excellent working relationships that had developed through joint interagency training…and previous emergency incidents” (USFA-TR-166, 2007, pp. 2 – 4). The Edina Fire Department was well prepared and responded in three separate capacities over the course of the I-35 W bridge collapse; (a) providing ambulance coverage of Hennepin County’s southern primary service area due to surge demands from the bridge collapse, (b) giving mutual aid as a fire/structural collapse resource for Minneapolis fire and (c) responding as a structural collapse state asset on behalf of the State of Minnesota’s Task Force – 1 (USFA-TR-166, 2007; Van Buren, 2007). The I-35 W bridge collapse response is one of many examples where the EFD made use of their disaster communication, hazard mitigation and integrated preparedness capabilities to provide a valuable service to victims of disaster (USFA-TR-166, 2007; FEMA, 2011; FEMA, 2004; EFD, 2011, mission statement).

In summary, the literature review has demonstrated that there are disaster risks the City of Edina should prepare for and that past events give indication of future incidents that may challenge the community. The author discovered that there are many good reasons for the EFD to have an emergency management planner. Neighboring fire departments and communities have addressed the concepts, components, characteristics and training associated with emergency management planning and the Edina Fire Department should replicate their best practices in a complimentary manner. Finally, while there are differing methods on how to achieve the goal of emergency preparedness, it is imperative that the Edina Fire Department has an emergency management planner position to fill a current void in emergency preparedness, mitigation and response
activities for the city of Edina. Literature suggests the emergency management planner position should be standardized to meet local, state and national principles so that responders can effectively serve our community following a disaster. Personnel should be adequately trained and familiar with emergency management planning, training and its process. Results from the plans an emergency management planner would employ within the Edina Fire Department can aid in defining an appropriate and timely response to a disaster or major event. Effective, updated emergency management planning is helpful for firefighters, responders and the community.

Procedures

The purpose of this research project was to identify the potential impact an emergency management planner could have on the EFD and the community.

Descriptive research methodology was used to complete this project. This document is formatted according to the American Psychological Association Fifth Edition text in conjunction with the *Operational Policies and Procedures for Applied Research* guidelines from the National Fire Academy’s Executive Fire Officer Program.

Research and data collection began with a preliminary search at the National Fire Academy’s Learning Resource Center in May 2011. The author visited the National Fire Academy’s Learning Resource Center a second time in July 2011 to obtain valuable research data and information. Research and data collection was conducted at the Minnesota State College’s and Universities Fire/EMS/Safety Center library in St. Paul, Minnesota in the spring of 2011. Research and data collection was also conducted at the Carver County Library in Chanhassen, Minnesota and the Hennepin County Library in Minnetonka, Minnesota in the spring and summer of 2011. Technical reports, white
papers, articles in magazines, previous Executive Fire Officer Applied Research Projects, thesis papers and textbooks were utilized to gain relevant information regarding subject matter for this research project. The Internet was also used to gain useful information pertaining to the research questions for this project.

The criteria used to help focus on and identify information for this applied research project had to be relevant to the subject matter and the purpose of the research project. Relevant information had to be as current as possible to be included in the research. Finally, the recommendations for the EFD exploring the feasibility and usefulness of an emergency management planner had to be founded on local and nationally recognized best practice standards.

The first part of the research included a literature review to answer four research questions: (a) what concepts, components, characteristics, and training would be part of an emergency management planner position; (b) what emergency incidents and disasters are likely to impact the City of Edina, Minnesota; (c) what emergency incidents and disasters are likely to impact the City of Edina, Minnesota; (d) why is it important for the Edina Fire Department to have an emergency management planner.

The second portion of the research included a survey instrument to gain information related to the research questions. This survey instrument was sent to fire department members identified as chiefs or departmental leaders responsible for emergency management preparedness and operations. Additionally, participants had to represent service areas located within 25 miles of the City of Edina to be considered. Using these criteria, a total of 35 eligible respondents were invited to complete the survey instrument. 25 completed replies yielded a response rate of 71%. The survey instrument
was available for 61 days from June 1, 2011 through July 31, 2011 via a link to the Internet web site surveymonkey.com®. The cover letter associated with this survey instrument can be found in Appendix B. The survey instrument with tallied responses is submitted as Appendix C.

The nine-question survey was conducted to elicit perceived importance of having an EM planning position within the EFD. It also aided in identifying how other fire jurisdictions address their EM needs. Finally, the survey instrument revealed concepts, components, and training qualifications accepted as best practices for an effective fire based EM planning position in the area.

Participants were asked to answer basic demographic questions such as identifying their rank or job title, the size of community they served, and the type of organization they represented so that data could be analyzed for trends. Next they were asked to indentify demographics of the community they represent and protect such as population, geographic density and area. Responses from the previous questions were correlated with the respondents’ perceived organizational level of EM preparedness involvement. The next three questions queried respondents’ views and opinions on which department currently administers EM preparedness duties and his or her estimation on which department is best suited to handle EM preparedness duties. Question six identified the respondents’ level of EM involvement while question seven identified the characteristics, components and concepts that best identify an Emergency Management/preparedness program. The final two survey questions allowed the respondent to identify the perceived completeness of their EM plan and when the plan had been utilized either in training or during an actual event.
For each response, in addition to a check box, an opportunity for manually inputting responses was offered as a means to enter additional comments or clarifications. A number of respondents utilized this option.

Participants of the survey instrument were encouraged to not include their names or other identifiable remarks on the survey so that input would remain anonymous to the researcher.

In an effort to expand this research beyond a survey instrument, a personal, semi-directed interview was conducted with Edina police lieutenant Mike Nibbe, who is also the emergency management coordinator for Edina Minnesota, on July 20, 2011 at approximately 2:30 p.m. This interview was accomplished by telephone. The interview was conducted to aid in the research questions: What concepts, components, characteristics, and training would be part of an emergency management planner position; how do other fire jurisdictions address their emergency management needs; what emergency incidents and disasters are likely to impact the city of Edina, Minnesota; and why is it important for the EFD to have an emergency management planner?

Questions and responses from this interview can be found in Appendix D.

Lieutenant Nibbe is the Emergency Manager and Civil Defense representative for Edina Minnesota. He has institutional and relevant subject knowledge expertise from multiple major weather events and disasters that others do not possess. Further, Lieutenant Nibbe is considered by his peers to be an expert in the field of emergency preparedness and he participates in various local and state emergency preparedness committees.
The researcher also obtained emergency management plans from several cities that underscored hazards the City of Edina may anticipate necessitating a robust emergency management preparedness position. These plans identified a need for continual EM preparedness planning; further, these documents illustrated why it is important to constantly plan and train for significant events that may affect Edina, Minnesota following a disaster and outlined best practice concepts, components, characteristics, and tools that may be included in a preparedness guideline for the Edina Fire Department.

This researcher acquired historical, current and projected climatology records for the City of Edina through historical documents and the Internet that provided valuable weather pattern predictions for the local area. This proved useful in determining which major weather events the city should plan for in developing an emergency management continuity of operations plan.

Lastly, a review of departmental records substantiated personal communications regarding major weather events and disasters the department has previously encountered. This information may prove useful in foretelling what disasters the department may expect to encounter in the future and aid in developing strategies to minimize or mitigate the effects of these events.

An Internet search was conducted to discover what strategies other departments and communities are using to address risks associated with disasters and major weather events affecting their community. Useful information from other agencies aided in answering research questions and developing recommendations for this research document.
In an effort to further expand this research, a second semi-directed interview was conducted with Mr. Edward Coppersmith, Emergency Manager and Civil Defense planner for Chanhassen, Minnesota. This interview was conducted on July 29, 2011 lasting approximately an hour and one-half in Mr. Coppersmith’s office. The semi-directed interview was conducted to aid in the research questions what concepts, components, characteristics and training should be part of an emergency management planner; how do other fire jurisdictions address their emergency management needs; and why is it important for EFD to have an emergency management planner.

The questions and responses from this interview can be found in Appendix E

Mr. Coppersmith is the emergency manager and civil defense representative for Chanhassen, Minnesota. He possesses institutional and relevant subject knowledge from multiple major weather events and disasters that others do not have. Additionally, Mr. Coppersmith is considered by his peers to be an expert in the field of emergency management, including emergency preparedness planning, and participates in various local, county, state and national emergency preparedness planning groups.

Assumptions

Because all of the fire chiefs and emergency management department leads invited to complete the survey instrument had publicly published electronic mail (e-mail) addresses, it was assumed that all potential survey respondents had access to the Internet.

It was assumed that all those who answered the survey questionnaire understood the questions asked and they answered them honestly and accurately. It was also assumed that the participants allotted adequate time to answer the survey instrument.
Given that the researcher provided a written explanation for the survey instrument, it was assumed that the respondents understood the purpose of the research.

It was assumed that Mr. Edward Coppersmith and Mr. Mike Nibbe understood the questions asked during the interview and answered each question honestly and accurately and that they correctly remembered the events and procedures discussed. It was also assumed that adequate time was allotted to each question for the interviewees to answer them completely and to the best of their ability.

The interviews were conducted with the respondents not having prior knowledge of the questions. It is possible that if Mr. Coppersmith or Lieutenant Nibbe had prior knowledge of the questions asked in the interview, they may have answered them differently.

It was assumed the information obtained during literature review was accurate, truthful and where appropriate, peer reviewed before publication.

Finally, the author assumed the data provided by the NWS, EFD, and other governmental entities was accurate, current and reliable.

**Limitations**

Several limitations were encountered during the research process.

The literature search revealed a finite amount of relevant and timely information available to the author. This lack of relevant information made it difficult to decide which evaluation methods were best. Additionally, some of the available relevant information was published over ten years prior, causing some concern regarding the significance and timeliness of the subject matter. Ultimately, the method most relevant was used, based upon best practice and regional relevance to this particular applied research project.
The researcher was limited in obtaining data that specifically represents major weather events or disasters directly affecting the EFD response capabilities. The Edina Fire Department does not collect or track fire response capability during disasters or major weather events and therefore, this data was not available for retrieval.

Because no analysis of non-respondents was completed, the data may potentially be biased toward only capturing responses from the portion of the survey population that has an emergency management planning process established. Additionally, the use of self-reported data includes the risk of over (or under) reporting by the respondent. The use of categories in the survey instrument may have resulted in a lack of continuous data and ultimately affected the respondents’ response.

The researcher experienced difficulty gathering exactly what other fire departments provide regarding EM planning as many survey respondents indicated they either do not have a program in place or that they perceive the training and preparation inadequate. Additionally each respondent had his or her own definitions, values and norms as it relates to EM planning and work ethic. It is possible these factors may have affected the way they responded to certain questions. Most respondents claimed to have an EM plan in place, however upon further examination, some did not have a completed formal program that could be adopted.

Time constraints, available resources and funding further limited the researcher. Additionally, the researcher encountered difficulty in retrieving an adequate response to the survey instrument from some individuals who have a robust EM planning position established within their fire department.
The interview with Mr. Coppersmith was limited by telephone and instant messaging (IM) interruptions. It is possible Mr. Coppersmith may have lost his train of thought during one of these interruptions and would have possibly answered the questions differently if he had not experienced interruptions during the interview process.

Other important matters a police administrator must address as part of his or her job responsibilities may have limited the responses given by Lieutenant Mike Nibbe. It is possible that outside influences from supervisors may have limited or directed responses from Lieutenant Nibbe. Finally it is possible that the researcher missed non-verbal cues or gestures by the respondents during the interview process.

**Definition of Terms**

**Act of God:** a fatalistic “syndrome whereby individuals feel no personal responsibility for hazard response and wish to avoid expenditure on risk reduction” (Smith 1996, 70) as cited in Blanchard (2008, p. 7).

**All-Hazard:** any incident or event, natural or human caused, that requires an organized response by a public, private, and/or governmental entity in order to protect life, public health and safety, values to be protected, and to minimize any disruption of governmental, social, and economic services.” (USCG, IM Handbook, 2006, Glossary 25-1) as cited in Blanchard (2008, p. 17).

**Civil Defense (CD):** “the system of measures, usually run by a governmental agency, to protect the civilian population in wartime, to respond to disasters, and to prevent and mitigate the consequences of major emergencies in peacetime.” The term civil defense is now used increasingly. (UNDHA, Disaster Management Glossary, 1992, p.22) as cited in Blanchard (2008, p. 114).
**Community Emergency Response Team (CERT):** “a group of people organized as a neighborhood-based team that receives special training to enhance their ability to recognize, respond to, and recover from a major emergency or disaster situation” (Devich, n.d.).

**Disaster:** “an occurrence causing widespread destruction and distress; a catastrophe” (Dictionary, 2010, disaster).

**Disaster Management:** “the entire process of planning and intervention to reduce disasters as well as the response and recovery measures. It is a neglected element of development planning.” (D&E Reference Center 1998) as cited in Blanchard (2008, p. 293).

**Emergency management:** “the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters” (Blanchard, 2007).

**Emergency Manager:** the person who has the day-to-day responsibility for emergency management programs and activities. The role is one of coordinating all aspects of a jurisdiction’s mitigation, preparedness, response, and recovery capabilities. The local emergency management position is referred to with different titles across the country, such as civil defense coordinator or director, civil preparedness coordinator or director, disaster services director, and emergency services director (Blanchard, 2008, p. 361).

**Emergency Operations Plan (EOP):** an all-hazards document that specifies actions to be taken in the event of an emergency or disaster event; identifies authorities, relationships, and the actions to be taken by whom, what, when, and
where, based on predetermined assumptions, objectives, and existing capabilities (Blanchard, 2008, p. 366).

**Major weather event**: “extreme weather phenomena that are at the extremes of the historical distribution” (Abramovitz, J.N., & Dunn, S., 1998).

**Police, Fire, and Public Works Personnel**: “human resources who operate in each sector on a 24-hour-per-day basis (e.g., fire, law enforcement) and who could begin rapid assessment of damage immediately following a sudden onset event” (Fairfax, 2010).

**Shared services**: “the concentration of related resources performing like-activities, currently spread across the organization, to service multiple partners at lower cost and with higher service levels” (Chin, K., & Gilbert, M., 2009).

**Results**

Through descriptive research this researcher was able to locate sufficient information to answer all of the study questions. Additionally, recommendations were prepared to help the Edina Fire Department understand better the current situation and make possible future considerations of an emergency preparedness planning position from these results. The results of this research were synthesized from a review of documents, papers, and publications, a survey instrument, an interview with a subject matter expert and an interview with the individual responsible for emergency management preparedness. Detailed results of the survey are located in Appendix C while results from the interviews may be found in Appendix D and Appendix E.
**Answers to Individual Research Questions.**

**Research question one:** What concepts, components, characteristics, and training would be part of an emergency management planner position?

The concept of disaster management is not unique to recent times. Humans have been subject to the adverse effects of disasters since the dawn of their existence. On multiple occasions entire civilizations have been decimated by the impact of a natural disaster (Blanchard, 2007). Epidemics, pandemics and natural disasters, have been well documented by our ancestors and these events have repeatedly occurred through the centuries, each time resulting in a sizeable reduction of the world’s population. Theories suggest that many of history’s greatest civilizations, including the Mayans, the Norse, the Minoans, the Supe, and the Old Egyptian Empire ultimately fell, in part, by the effects of natural disasters. In these cases, it was floods, famines, earthquakes, tsunamis, El Niño events, and other natural catastrophic events – rather than their human enemies, which resulted in their ultimate demise (Fagan, 1999).

The United States has also experienced disasters that caused great death and destruction (Blanchard, 2006).

While the concept of EM dates back many thousands of years, the design of an “all-hazards” disaster and emergency management viewpoint is relatively new. Dr. Blanchard (2007) and a committee of EM leaders identified and defined the eight modern day principles, or components, to guide EM professionals. Blanchard (2007) believes emergency management must be:

1. Comprehensive – emergency managers consider and take into account all hazards, all phases, all stakeholders and all impacts relevant to disasters.
2. Progressive – emergency managers anticipate future disasters and take preventive and preparatory measures to build disaster-resistant and disaster resilient communities.

3. Risk-driven – emergency managers use sound risk management principles (hazard identification, risk analysis, and impact analysis) in assigning priorities and resources.

4. Integrated – emergency managers ensure unity of effort among all levels of government and all elements of a community.

5. Collaborative – emergency managers create and sustain broad and sincere relationships among individuals and organizations to encourage trust, advocate a team atmosphere, build consensus, and facilitate communication.

6. Coordinated – emergency managers synchronize the activities of all relevant stakeholders to achieve a common purpose.

7. Flexible – emergency managers use creative and innovative approaches in solving disaster challenges.

8. Professional – emergency managers value a science and knowledge-based approach based on education, training, experience, ethical practice, public stewardship and continuous improvement.

These components establish a foundation upon which one may develop an effective EM program (Blanchard, 2007). The National Fire Protection Association (NFPA) established standards on disaster/emergency management and business continuity in 2007. To provide a framework fire personnel may use to develop EM
planning strategies some common characteristics for EM program development include (NFPA, 2007):

1) Establishing leadership and direction for the program.

2) Hazard identification, risk assessment, impact analysis, and mitigation or prevention planning to include continuity planning and public education programs.

3) Development of emergency operations response and recovery plans by establishing operational procedures, defining facilities, establishing communications and warning systems and engaging resource management and logistical support through mutual aid and pre-placed contracts (A.4.1(3)).

These key program elements transcend the boundaries of prevention, mitigation, preparedness, response and recovery phases of incidents and should be incorporated in the EM plan of the community (NFPA, 2007, A.5.1.2). Burby, Deyle, Godschalk, & Olshansky (2000) stressed that EM planning must be integrated into the planning process of communities, to avoid isolation from other planning mechanisms. Kowalski (2011) suggests that a critical incident stress component should be incorporated into an EM position. It is important to understand and prepare for added stress levels and the potential for Post Traumatic Stress Disorders (PTSD) following major incidents and disasters (Kowalski, 2011).

R. Easton (2008), EM director of Clinton Missouri, asserts the EM manager is a key leader in planning, a coordinator of operations, a community liaison, a supporter of mitigation efforts and a major proponent of training, planning and preparedness (p.1). These characteristics of an EM position are widely supported in literature (Blanchard,
2007; Burby et. al., 2000; Easton, 2008; Kowalski, 2011; Vendrell, 2001), and generally agreed upon to be the foundation of an effective EM program.

The American Society for Industrial Security’s Emergency Planning Handbook (1994) identifies four main components of an effective EM plan:

1. Defining an emergency in terms relevant to the organization doing the planning.
2. Establishing an organization with specific tasks to function immediately before, during and after an emergency.
3. Establishing a method for utilizing resources and for obtaining additional resources during and emergency.
4. Providing a recognizable means of moving from normal operations into and out of the emergency mode of operation.

The International Association of Emergency Managers association identified training, formal education and professional development as three components of an effective emergency manager position (Bovyn, 2009).

According to FEMA (2011), there are specific KSA’s required to function as an effective Emergency Manager. The Emergency Management Institute, a branch of the FEMA program, offers self-paced training courses designed for people who have emergency management responsibilities and focus on nine mission areas identified in the national preparedness goal. These training modules include:

1. Incident management.
2. Operational planning.
3. Disaster logistics.
4. Emergency communications.
5. Service to disaster victims.
6. Continuity programs.
7. Public disaster communications.
8. Integrated preparedness.

FEMA has recognized IAEM as the standard for obtaining a CEM designation (Blanchard, 2007; FEMA, 2011).

Many states, including Minnesota, acknowledge the importance of EM and offer their own CEM status. Each state has varying requirements for achieving this CEM status. The state of Minnesota, through the department of Homeland Security and Emergency Management (HSEM) offers a CEM program built upon FEMA independent study courses, classroom education, professional development and capstone seminars. A document titled “MN Homeland Security and Emergency Management Professional Certification Training Check List (2010-2011)” outlines the requirements to become a Minnesota CEM and is included as Appendix A of this research.

Research indicates local jurisdictions should not wait for another group or agency to make an assessment because the fire departments’ interests and concerns may not be addressed, including those deemed critical to fire department operations and life safety measures (Strickland, 1998).

Results from the survey instrument indicate that preparedness (100%), coordination (92%), response (88%), professionalism (84%), flexibility (84%) and collaboration (84%) are important characteristics, components or concepts that best
identify an emergency management/preparedness program. Table two shows the relationship between number times a respondent identified a concept, characteristic or component they believed important for an EM program with the number of respondents. The survey instrument also revealed an EM plan is constantly evolving and that the majority of respondents (60%) have utilized their EM plan within the past year.

The interview with Lieutenant M. Nibbe of the Edina Police department and Edina’s emergency management coordinator revealed that he devoted approximately five percent of his work time towards EM projects but that the city was “getting by but not moving forward” (M. Nibbe, personal conversation, July 20, 2011). Lieutenant Nibbe also stated he believed the police and fire department working in a coordinated and shared responsibility fashion would best serve Edina (M. Nibbe, personal conversation, July 20, 2011). M. Nibbe indicated during the interview that most of the communities surrounding Edina, MN had fire service personnel administering and coordinating their EM planning because “that’s what you (fire personnel) do every day on every call. I mean you guys (fire) really know NIMS where we (police) do a good job of perimeter control” (M. Nibbe, personal conversation, July 20, 2011).

The personal interview with Mr. Coppersmith revealed his belief that the fire service was well suited to handle the responsibilities of EM preparedness planning and that incorporation of the NIMS framework, including training of personnel that typically are not accustomed to NIMS, was a major component of EM. Mr. Coppersmith also indicated that development, and simulated execution, of an all hazard emergency operations plan was critical to the successful mitigation of a local disaster (personal conversation, July 22, 2011).
### Table 2

*Characteristics, concepts and components best describing EM programs*

<table>
<thead>
<tr>
<th>Characteristic, concept or component</th>
<th>Number of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparedness</td>
<td>25</td>
<td>100%</td>
</tr>
<tr>
<td>Coordination</td>
<td>23</td>
<td>92%</td>
</tr>
<tr>
<td>Response</td>
<td>22</td>
<td>88%</td>
</tr>
<tr>
<td>Professionalism</td>
<td>21</td>
<td>84%</td>
</tr>
<tr>
<td>Flexibility</td>
<td>21</td>
<td>84%</td>
</tr>
<tr>
<td>Collaboration</td>
<td>21</td>
<td>84%</td>
</tr>
<tr>
<td>Mitigation</td>
<td>20</td>
<td>80%</td>
</tr>
<tr>
<td>Recovery</td>
<td>20</td>
<td>80%</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>19</td>
<td>76%</td>
</tr>
<tr>
<td>Integrated</td>
<td>16</td>
<td>64%</td>
</tr>
<tr>
<td>Progressive</td>
<td>15</td>
<td>60%</td>
</tr>
<tr>
<td>Risk-driven</td>
<td>14</td>
<td>56%</td>
</tr>
<tr>
<td>Training</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Community oriented</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>Multiple agency/jurisdiction</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Self sustaining</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

A synopsis of literature and research indicate the fire service and emergency management are closely related and there are many concepts, components, characteristics, and training that would be part of an emergency management planner position in the Edina Fire Department. Interviews and a survey yielded many best practices that can be incorporated into an EM position that will benefit Edina citizens.

**Research question two:** How do other fire jurisdictions address their emergency management needs?
It appears the fire service participates in the emergency management process throughout the globe (FDMA, 2011, Chapter 3; Y. Zaho, n.d.; Sensenig & Stambaugh, April, 2008). Drabeck & Hoetmer (1991) state the missions, objectives and goals of emergency management often align with those of the fire service and that EM is noticeably incorporated in the fire service.

The United States Fire Administration released a special report titled “Fire Department Preparedness for Extreme Weather Emergencies and Natural Disasters” (Sensenig & Stambaugh, April, 2008). In this report, it recognized that when natural disasters strike, “the public relies heavily on first responders, and the more substantial the incident or disaster, the greater the need for assistance delivered by the fire department” (p. 1). The report states, “most fire departments have been through…natural disasters at some point” and addresses the types of service calls fire service personnel are most likely to arise as a result of these disasters (p.1). The USFA special report provides information through advanced emergency planning fire departments can use towards enhancing their own level of preparedness to ensure greater safety and operational efficiency the next time disaster strikes (p.1-2).

Paul Peluso (Firehouse, 2010, November) believes FEMA has firmly had its finger on the pulse of the fire service for years and works, in unison, with fire service personnel to mitigate the effects of disasters through training, grants, and assistance following these events (p. 14).

In Minnesota the governor, working through the Minnesota Department of Public Safety, Division of Homeland Security and Emergency Management (HSEM), is responsible for maintaining an effective emergency management program throughout the
state. This includes monitoring county and municipal emergency management programs to ensure compliance with federal and state regulations and statutes (Minnetonka, emergency management, 2011).

The state of Minnesota offers state level EM guidance and support for local fire departments. Through the Minnesota State Duty Officer program, community fire departments have access to operational resources that are typically not supported at the local level and add an additional level of response capability to local fire jurisdictions.

At the city level, the emergency management director is more often than not a chief level officer with specialized training, skills and abilities. This person is responsible for developing disaster response capabilities and coordinating the development of an emergency response plan for the jurisdiction (Minnetonka, emergency management, 2011). Interviews with E. Coppersmith and M. Nibbe validate this assumption of a chief level fire officer responsibility in most communities.

Of the seven cities bordering Edina, Minnesota, five have dedicated EM planning personnel that are directly affiliated with the fire service. The remaining two cities share EM responsibilities with fire and another department (Bloomington, emergency management, n.d.; Devich, S., n.d.; Eden Prairie, emergency preparedness, 2011; Hopkins, 2011; Minneapolis, 2011; Minnetonka, emergency management, 2011; St. Louis Park, 2011, June 7).

The survey instrument revealed that thirty-six percent of respondents indicated that EM duties are currently the responsibility of a stand-alone emergency preparedness department for the community they represent. Thirty-two percent indicated the fire
department has these responsibilities and twenty-eight percent designated emergency management duties are the responsibility of the law enforcement.

Of the survey respondents, forty-eight percent reported that the fire service is best suited to perform emergency management/preparedness duties in their community. Another forty-eight percent indicated that a separate emergency management department should administer these duties while one respondent indicated law enforcement is best suited. One respondent (4%), indicated law enforcement is best suited to handle EM preparedness duties.

Mr. Ed Coppersmith alleged that somebody in the fire service, maybe not the chief but someone in the upper echelons should administer preparedness duties for the city (personal communications, July 29, 2011). This opinion is supported by literature (Minnetonka, 2011). M.Nibbe (personal communication, July 22, 2011) stated the fire and law enforcement, together, would best be able to govern EM duties, adding that these individuals should be granted authority to make decisions in the best interest of the city. Table three shows the respondents’ opinions as to who is best suited to perform EM/preparedness duties.

Table 3

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire service</td>
<td>12</td>
<td>48%</td>
</tr>
<tr>
<td>Separate stand alone division</td>
<td>12</td>
<td>48%</td>
</tr>
<tr>
<td>Law enforcement</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>
CERT’s play an important role in community preparedness of disasters and are routinely controlled by fire service personnel (J. Luna, 2011; LAFD, 2011; Rochester-Olmsted, 2009, p. 6). The Community Emergency Response Team concept was developed and implemented by the City of Los Angeles Fire Department in 1985. They recognized that training citizens in basic disaster survival and rescue skills would greatly embrace the ability of citizens to survive until first responders or other assistance could arrive (Luna, 2011).

This training proved to be so beneficial, the Federal Emergency Management Agency introduced it as a national initiative and the program was made available to communities nationwide. In 1994 the Emergency Management Institute a division of FEMA expanded the CERT format to make it applicable to all hazards.

The fire service has adopted and embraced the success of programs such as CERT, recognizing the importance and benefits programs like these have on their communities’ ability to prepare for and respond to situations having a negative impact. While programs such as CERT are a step in the right direction, Luna (2011) states that we must be “continually improving” our response preparedness capability. An example is illustrated by the City of Rochester, Minnesota where FEMA noted the Rochester Fire Department was instrumental in rewriting CERT course curriculum that is now taught nationwide (Luna, 2011).

Results from interviews and original research support literature indicating that the fire service is involved in emergency management practices in many communities. Many examples of best practices were formulated or refined by fire service personnel engaged
with emergency management in their communities. Survey respondents indicated that fire services or stand-alone emergency management divisions are best suited to provide EM administration and implementation for localities.

**Research question three:** What are the major weather events or disasters likely to impact the City of Edina?

The City of Edina is located in a mostly densely populated suburban area that has an aging population with growing special needs. A risk assessment completed by the City of Edina indicates the city is susceptible to a number of natural, technological and man-made hazards.

According to the *City of Edina Emergency Management Plan* (2008), the City of Edina should prepare for severe weather events that may include tornados, damaging high winds, lightning, floods, and extremes of temperature (heat and cold), ice storms, blizzards and droughts. This position is supported through personal communications with senior members of the Edina Fire Department and fire department records.

The department has responded to a number of previous incidents that correlate with the predicted disaster risks including major fires, significant explosions, major weather events (tornados, floods, winter storms) and noteworthy hazardous materials incidents. (J. Struzyk. personal communication, December 29, 2009; B. Lawson December 18, 2009). The department therefore should plan and prepare for these types of incidents should they occur again.

Analysis of data provided by the *National Climate Data Center* (2009) indicates that in Hennepin County, inclusive of Edina, from January 1, 1950 through August 31, 2009, there have been a total of 766 events classified as major weather events – excluding
major winter storms and heat waves – resulting in 29 deaths, 279 injuries and an estimated property loss in excess of $1.038 billion dollars.

The National Weather Service’s State Climatology Office (NWS, 2009) identified 1,059 deaths related to winter storms with an average of 33 deaths per year in Minnesota.

The NWS (2009) also indicates that Minnesota is situated in a region of maximum tornado occurrences in the United States commonly referred to as Tornado Alley. Hennepin County has experienced tornados in every month from March to November, with three-quarters of all tornados occurring in the months of May (16%), June (33%) and July (27%) (NWS, 2009). In June 1987 the National Weather Service (2009) recorded a tornado that traveled through the city of Edina causing a reported 58 injuries and an estimated one million dollars worth of property damage. In May of 2011 a tornado skirted Edina’s border causing significant property damage, numerous injuries, and two deaths to communities sharing borders with Edina. Edina Fire Department assisted in search, rescue and fire suppression activities within these neighboring communities under mutual aid agreements. According to the NWS (2009), there have been 6,754 deaths resulting from 1,371 tornados or high winds from 1940 to 2008 in Minnesota (as cited in Siems, 2010).

Survey results suggest major weather events require respondents to put into action their emergency preparedness plans. Ed Coppersmith (personal conversation, July 29, 2011) supports this view, stating that his EM duties dramatically increase each spring with flooding issues. As does Mike Nibbe (personal conversation, July 18, 2011) who states “we seem to be busier during major weather events.” The author developed a job
aid in 2010 to aid the city of Edina in performing rapid damage assessments following a major weather event (Siems, appendix D, 2010).

Results from interviews and research support the literature suggesting that Edina should prepare for specific weather events and that weather events will increase the resources and time required for emergency management practices. Further, these past weather events are good predictors of possible future events.

Research question four: Why is it important for EFD to have an emergency management planner?

One of the most important tasks that the fire service performs is disaster planning since a fire department is basically a disaster control agency (Bahme & Kramer, 1996). On Scene (1994) found that, “a significant number of fire service leaders and professionals – almost 70 percent – are their communities emergency managers” (as cited by Shaw, 1999). The survey instrument was not able to support this view however.

Research question five asked “In your opinion, who do you believe is best suited to perform Emergency Management/preparedness duties in your community?” Table two shows that 48% believed the fire service, 48% believed a separate or stand-alone department/division and 4% indicated law enforcement were best suited.

Unfortunately we know that “disasters are inevitable, although we do not always know when or where they will occur” and we also understand that most Americans have not taken steps to prepare for a natural disaster, terrorist attack or other emergency (Sizanni, n.d., p. 1). According to a study on preparedness, only about one-third have made plans with family members about how they would communicate with each other during a crisis (Hall, 2006, p.1).
Because most Americans are ill prepared for calamities, it is a well-known fact that fire departments, no matter what service delivery type, often are first to respond to disasters in their community (Shaw, 1999). The IAFC (2002) also recognizes that local fire departments are the first responders to the national or human-caused catastrophic events (p. 9). Because of this, fire departments must be involved in every aspect of community emergency planning (United States Environmental Protection Agency, 1988).

Former FEMA Director James Lee Witt states that no matter what the disaster, large or small, your community will turn to the local fire department and expects them to know how to handle the situation (1996). In their white paper, Matsubara & Urashima (2005) discuss how disaster preparedness has evolved from fire service roots:

Fire protection and disaster management began with firefighting activities and response to fires after they broke out, later expanding to include areas such as fire prevention, response to hazardous materials accidents, first aid and rescue activities, response to natural disasters such as earthquakes, response to nuclear power accidents, and so on (2-1, p. 76).

Bahme & Kramer (1992) also found many similarities when comparing disaster conditions with fire situations handled on a daily basis by fire departments such as the need for immediate response, utilization of a strong incident command presence, large personnel requirements, the use of inter-agency mutual aid and pre-incident planning. Both are components fulfilling fire department missions. Regardless of the cause, disasters can, and often do, inflict similar challenges and service demands on communities for which fire agencies are well experienced.
Beginning before 1970, the City of Edina recognized the value of EM and the importance of fire protection. Back then EM was classified as civil defense. Edina city code Section 505 - Civil Defense and Emergency Regulations (Edina city code, 2011) – allows for the mayor of Edina to establish a civil defense agency, under the supervision and control of a director of civil defense. The Director is appointed by the Mayor for an indefinite term and may be removed by the Mayor at any time (505.03). This city code also gives broad powers and duties to the civil defense director to “organize, recruit, and train auxiliary police, auxiliary firefighters, emergency medical personnel, and any other personnel that may be required, on a volunteer basis, to carry out the civil defense plans of the City and the State” (Edina city code, 2011, 505.04 Subd. 4).

The author was not able to locate any documents that identify a currently designated civil defense director for the city of Edina. Debra Mangen, Edina City Clerk, confirmed that the city does not presently have a civil defense director as allowed by city code 505 (D. Mangen, personal communication, June 8, 2011). However, M. Nibbe (personal communication, July 22, 2011) suggests that at least part of the police chief’s annual salary is attributed to EM duties and responsibilities.

This researcher investigated when the city of Edina last had a paid EM or civil defense planner. In the last twenty years no documents could be located to show compensation to any individual for services rendered as Edina’s civil defense director. Ms. Deb Mangen (personal communication, June 8, 2011), the city’s clerk, substantiated the authors assumption that no records were available to show compensation of a civil defense director in Edina, MN.
Chrichlow (1997) states that municipalities with little to no functioning EM implicitly choose improvisation as their Emergency Management strategy. This may be somewhat true; firefighter and paramedic Bob Lawson, “The (fire) department has been taxed on many occasions from disasters ranging from flooding, to blizzards, to heat waves, to major fires” (personal communication, May 19, 2011).

These results indicate that the EFD is involved in emergency responses and therefore should have an active role in emergency management planning activities.

Interviews with E. Coppersmith and M. Nibbe suggest that emergency preparedness has its future in the fire service. Coppersmith believes that fire service personnel are best suited to handle EM preparedness because they “are on duty twenty-four hours each day. They [fire fighters] carry a pager and are never off duty” (personal communication, July 29, 2011). Coppersmith continues by stating each fire hydrant is a representation of disaster preparedness (personal communication, July 29, 2011). Edina police Lieutenant Mike Nibbe is responsible for the cities emergency management preparedness and suggests the Edina Fire Department should have an integral role in emergency preparedness stating,

…. You guys (fire) really know NIMS where we (police) do a good job of perimeter control. I think that a coordinated or shared responsibilities model would work best for Edina. We would be able to have a unified command in planning and coordination of services. We work hand-in-hand on emergency scenes why not in planning? (personal communication, July 20, 2011).

Regrettably, according to M.G. Stigler (2010), many police departments have not embraced incident management. Law enforcements lack of acceptance of incident
management principles have been highlighted in Stigler’s research: “Municipal police departments do not want NIMS, won’t use it and don’t want to learn it”; “Adoption is widespread, implementation is not”; and “Law enforcement does not use Incident Command” (because) “An informal system is in place, just not verbalized” (2010, pp. 82-84).

Shields (1996, emergency planning) defined emergency planning as a process that includes three separate components: identification and analysis of the potential hazards and mitigation of their consequences. The fire service has already been accomplishing these components for many years through pre-planning, and supporting legislation that regulates hazardous conditions (Shaw, 1999).

We know that Bahme & Kramer (1992) also found many similarities when comparing disaster conditions with fire situations handled on a daily basis by fire departments. Shaw (1999) agrees stating, “to be well prepared takes proper planning, which is accomplished by an effective fire service EM planner” (p. 23, ¶1).

Finally, documents indicate the EFD should be well situated to succeed at EM planning duties for the city since the fire department already accomplishes many of these same tasks in their day-to-day operations and portions of Edina’s current plan already stipulate EFD involvement as a lead agency (City of Edina Emergency Management Plan, 2008; EFD, 2011, Storms and severe weather S.O.P.; EFD, 2007, Mission statement).

In summary, this research identified relevant concepts, components, characteristics, and training requirements that would be part of an emergency management planner position within EFD. It also examined how other fire jurisdictions
address their emergency management needs and explored what emergency incidents and disasters are likely to impact the City of Edina, Minnesota. Finally this research revealed many reasons why it is important for the Edina Fire Department to have an emergency management planner.

Discussion

Relationship between study results and literature:

Literature and research supports the premise that the Edina Fire Department can utilize established available job aids and tools to prepare its community for disastrous events thereby creating a safer environment for our employees and the community.

We know that disaster preparedness is not a new concept to societies and that many communities have experienced great loss through disasters (Emerton & Joostoon, 1988; Fagen, 1999; McEntire, 2009). We also understand that as a result of experiencing disasters, many communities and societies developed various iterations of emergency management concepts, components and characteristics to deal with these disasters (Blanchard, 2007; Fagen, 1999).

Through these EM beginnings, we now have established norms and expectations for communities to meet in their preparedness planning, a standard or benchmark so to say (Blanchard, 2007; Bauer, 2009; Stigler, 2010; NFPA 2007). There are even international, national and state certifications one can obtain to prove their knowledge, skills and abilities in EM (Blanchard, 2007; Boyyn, 2009; Burby et.al., 2000; IAEM, 2011; NFPA 2007).

We know that most experts today advocate a comprehensive “all hazards” approach to emergency preparedness that accounts for potential natural, technological,
and human created threats to communities with the purpose of saving lives, reducing property loss, protecting the environment and lessening an organization’s liability potential and “an all hazards plan transcends all planning and work groups [public & private] in the community” (Burby et. al., 2000 p. 58; Vendrell 2001).

Research has indicated that great time and energy is needed to make an effective community EM plan, but once established, it requires as little as five to ten percent of an EM planner’s workday to keep it updated (M. Nibbe, personal interview, July 20, 2011; E. Coppersmith, personal conversation, July 29, 2011). Campanella (2011) reminds us, “emergency preparedness has no end goal or finish line, rather it is an ever evolving transitional state of readiness to react and overcome major catastrophes” to enable a community to thrive following a disastrous event. Constant updating and refinement are required to maintain superior EM preparedness. According to the survey instrument we understand most (68%) communities do utilize their EM plans at least annually.

We now recognize that missions, objectives and goals of emergency management often align with those of the fire service (Drabeck & Hoetmer, 1991). This appears to be universally true throughout the globe (FDMA , 2011; Zhao, n.d.). Further, Sensenig & Stambaugh, (April, 2008) state “most fire departments have been through…natural disasters at some point” and it is recognized that when natural disasters strike, “the public relies heavily on first responders, and the more substantial the incident or disaster, the greater the need for assistance delivered by the fire department” (p. 1). The USFA (2008) special report provides information through advanced planning that fire departments can use towards enhancing their own level of preparedness to ensure greater safety and operational efficiency the next time a disaster strikes (p.1-2).
We know that in each of the cities surrounding Edina, there is at least some type of fire department involvement in EM planning with most (71%) taking a lead role in EM preparedness planning. The two surrounding cities that do not have fire service representatives leading EM duties exercise a shared services model, with either public health or law enforcement officials and fire department personnel co-administering EM responsibilities.

The fire service as a whole has embraced the concepts of emergency management practices into every day life. A few have excelled to provide benchmarks of excellence in EM such as the LAFD (2011) and the Rochester fire department (Luna, 2011). This was reiterated in personal interviews with M. Nibbe (Appendix D) and E. Coppersmith (Appendix E).

It is evident through literature and research that the City of Edina will likely experience a disaster related to major weather event. According to the *City of Edina Emergency Management Plan* (2008), past experiences and a study of current conditions suggest that the City of Edina should prepare for severe weather events that may include: tornados, damaging high winds, lightning, floods, extremes of temperature (heat and cold), ice storms, blizzards and droughts. These types of events in the past have affected the Edina community and have resulted in major damage, injuries and death. They have also overwhelmed local resources.

Additionally, civil unrest, technological and human disasters have previously affected the community, necessitating the Edina Fire Department to prepare for these major incidents.
Currently, the Edina Fire Department can adequately handle singular, day-to-day incidents or events. They are said to be “routine” (J. Struzyk personal communication, December 18, 2009). However, major incidences or emergencies can, and have, exceed the capacity of Edina Fire Department to adequately respond. For these instances mutual aid, regional aid and sometimes state or federal assistance is required to mitigate these events (Edina City Code, 2010). Major incidences or emergencies can be regarded as those events exceeding the day-to-day capabilities of the local agency, that last for extended periods, and/or require the assistance of regional, state, and in some cases, federal resources with staffing, equipment or funding to mitigate (Neal, 2003, p 35).

Disaster planning is especially important by a fire department because most Americans have not taken the proper steps to prepare themselves for catastrophic events (Hall, 2006). It is a well-known fact that fire departments, no matter what service delivery type, often are first to respond to disasters in their community. The IAFC (2002) recognizes that local fire departments are the first responders to the national or human-caused catastrophic events (p. 9). Because of this, fire departments must be involved in every aspect of community emergency planning (United States Environmental Protection Agency, 1988). Former FEMA Director James Lee Witt states that no matter what the disaster, large or small, your community will turn to the local fire department and expects them to know how to handle the situation (1996).

We know one of the most important tasks that a fire service performs is disaster planning since a fire department is basically a disaster control agency (Bahme & Kramer, 1996). According to Shaw (1999), one could infer that due to the similarities, fire departments are best situated to handle and prepare for disasters thereby making them the
most logical choice in EM planners. Research conducted by the author supports these postulations (Appendix D; Appendix E).

Research indicates the City of Edina can fund an EM director position through a little used city code (505) and that the Mayor is legally responsible for EM duties unless these responsibilities are delegated to a competent and appropriate person. While we understand that the police chief has been delegated the responsibilities of EM planning in Edina, personal conversations indicate that little time or resources are devoted to this endeavor (Appendix D). Edina Police Lieutenant Mike Nibbe stated he is the delegated EM coordinator but that this position would be more effective if shared with a fire service representative (personal conversation, July 20, 2011).

Unfortunately, many police departments have not embraced incident management (Stigler, 2010). During an emergency, there is little time to specify the ground rules for interagency cooperation. Consequently, emergency managers have agreed to implement a prearranged structure that effectively manages any conceivable type of dangerous situation and that structure involves incident management (Price, 2004, p.2). Documents indicate the EFD should be well situated to succeed at EM planning duties for the city since they already accomplish many of these same tasks in their day-to-day operations (City of Edina Emergency Management Plan, 2008; EFD, 2011, Storms and severe weather S.O.P.; EFD, 2007, Mission statement).

Incident management and the incident command system is well entrained in the U.S. fire service, dating back to the early 1970s when FIRESCOPE (FIre RESources of California Organized for Potential Emergencies) was developed for handling large and complex incidents as stated by Mike Price (2004, p.1). In March of 2004, the National
Incident Management System (NIMS) was born with adoption of these practices by the Department of Homeland Security (DHS) (Price, 2004, p.1). The NFPA also accepted NIMS in 2002 as NFPA Standard 1651 (Price, 2004, pp. 1-2). Unfortunately NIMS has not been well received by law enforcement (Bauer, 2009; Stigler, 2010).

Interpretation of Results:

The Edina Fire Department has an opportunity to fill the void of emergency management planning that is currently nearly non-existent. The two semi-directed interviews and survey instrument reinforced the available literature views on emergency management preparedness positions. The author was surprised to discover that only five to ten percent of their workday was devoted to EM responsibilities by Lieutenant Nibbe (Appendix D) and Assistant fire chief Coppersmith (Appendix E). Literature review indicated that other services and individuals devote a much greater amount of time and energy to preparedness planning with great success (Minnetonka, 2011; Minneapolis, 2011; Rochester, 2011). As noted in both interviews, however, more time and energy are given to planning and response when there is an active or anticipated event that may overwhelm available resources. Research data revealed many EM plans are utilized and updated at least yearly which also surprised the author, since personal experience demonstrated little attention to EM planning functions occur within the Edina Fire Department.

Implications for the organization:

In summary, the literature review and original research has demonstrated there are disaster risks the City of Edina should prepare for and past events are good predictors of future events that may challenge the community. The author discovered that there are
many good reasons for the EFD to have an emergency management planner. Neighboring fire departments and experts have addressed the concepts, components, characteristics and training associated with emergency management planners and the Edina Fire Department should emulate their best practices in a complimentary manner. Finally, while there may be differing approaches on how the city of Edina is to achieve the goal of emergency preparedness, it is imperative that the Edina Fire Department has an emergency management planner position to fill a current void in emergency preparedness, mitigation and response activities. The emergency management planner should have the knowledge, skills and abilities to meet state and national standards so that responders can safely, effectively and efficiently serve our community before and after a disastrous event occurs. Personnel should be adequately trained and familiar with emergency management planning, training and its process. Job aids resulting from an emergency management planner working within the Edina Fire Department can give support to defining an appropriate and timely response after a major event or disaster. Effective, updated emergency management planning is beneficial to firefighters, responders and the community.

Recommendations

The research presented in this study has demonstrated a need for the Edina Fire Department to take a proactive approach in developing an emergency management position for the city of Edina.

The problem is the Edina Fire Department does not have an emergency management planner, thereby increasing the risk of injury and death to its fire fighters who respond to emergency incidents and disasters. By not having a comprehensive
emergency management plan, the Edina Fire Department risks not identifying life safety hazards, damage that may propagate cascading events and uncoordinated mitigation efforts to challenges arising out of disasters. The purpose of this descriptive research project was to identify the potential impact an emergency management planner might have on the EFD.

Literature review, a survey instrument, two interviews and personal communications have enabled the author to create a roadmap of recommendations for the Edina Fire Department to consider. It is important to understand that emergency management is a process where implementation, training, continuous evaluation and refinement will lead to improved overall preparedness.

The following recommendations are designed to assist with the preparation, development and implementation of an emergency management planning position within the Edina Fire Department:

1. Internal support from the mayor, city manager, fire chief, senior staff officers, and rank and file department members should be obtained to effectively implement the development of an emergency preparedness planning position within the Edina Fire Department. Funding for this position may be accomplished through city code 505. Also strengthening of individual knowledge, skills and abilities will result in increased comprehension and capacity to prevent injury or death from disasters. Support should be continuous.

2. Provide pertinent updated data that supports both the need to develop this program and preparations required to administer this program, such as: (a)
money; (b) materials; (c) personnel; and (d) buy-in from key coalition members outside the organization, such as other departmental heads, non-governmental organizations and Citizen Emergency Response Teams. Solicit support from local politicians and community leaders. Inform these leaders there may be a potential of death or injury due to a lack of having a coordinated and progressive response to disaster situations and major weather events. Advise community and departmental leaders that a partial solution to this problem is to develop and implement a shared service model of EM planning between the fire department, the police and public health departments. Recommend to leaders that monies may be obtained through grants, donations or utilization of city code 505.

3. Foster coalitions and networks: creating or strengthening the ability of people and organizations to join together to work on this specific problem. By strengthening the collaboration among diverse partners, coalitions and networks can accomplish a broad range of goals, from information sharing to coordination of services. Three coalition partners that the Edina Fire Department may find useful are the Edina police department, the International Association of Emergency Managers, and the department of public health. These institutions have already developed and produced relevant planning materials that may be used by the Edina Fire Department.

4. Develop internal (fire department members) and external (Emergency Managers) instructors to teach and introduce a coordinated approach to disaster response: It is important to ensure that those who provide training,
advice, or serve as role models have the information, skills, and motivation
necessary to perform effectively.

5. Ongoing evaluation of the efficacy and efficiency of the “all-hazards” plan
should be conducted and changes should be made as necessary.

A key point in developing an emergency management planner position for the
Edina Fire Department is to tap into existing knowledge, networks and expertise. Similar
positions have been developed and implemented throughout the country with great
success. The City of Edina can learn from others and build from what others have
demonstrated to be successful.

The scope of this research is to provide a basis for a timely and comprehensive
position description that, if implemented, can aid in lessening the risk of injury or life
loss to firefighters and those affected following a disaster occurring within Edina. Initial
planning and preparation is the key to decreasing the severity and magnitude of the
situation so that responders can formulate and initiate an effective, timely, coordinated
response of resources. Once the initial planning is completed, time and energy must be
devoted to this living document in order for it to remain effective and relevant to the
community.
References


*Worldwatch Briefing.* 98-5.


American Society for Industrial Security, Standing Committee on Disaster Management,


Nudell and Antokol, supra note 1, p. 4.


unprepared for disaster: http://www.usatoday.com/news/nation/2006-12-17-
prepare_x.htm

https://dps.mn.gov/divisions/hsem/homeland-security-emergency-
response/Pages/emergency-management-assistance-compact.aspx

https://dps.mn.gov/divisions/hsem/training/Pages/em-certification-program.aspx

http://training.fema.gov/EMIWeb/edu/docs/DHS%20Civil%20Defense-HS%20-
%20Short%20History.pdf


summary.pdf

http://www.hopkinsmn.com/fire/index.php

http://www.iafc.org/files/downloads/ABOUT/POLICY_STATES/IAFCpol_Active
elInvolveWemergMgmt.pdf

http://www.joplinmofire.org/default.cfm?CFID=25938503&CFTOKEN=6725051

Kowalski, K.M. (2011), A missing component in your emergency management plans:
The critical incident stress factor. Retrieved May 28th 2011 from
http://www.cdc.gov/NIOSH/Mining/pubs/pdfs/amciv.pdf

‘Everything shook’. Star Tribune. Minneapolis, MN.


Los Angeles Fire Department (LAFD), Disaster Preparedness Section. (2010).
la.com/EmergPrepBooklet.pdf


McKinney, M., & Smetanka, M.J., (2011, March 17). Light 'like the sun' rose above
Mpls. blast crater. The StarTribune. Retrieved from
http://www.startribune.com/local/118164804.html

Protection and Disaster Management — A Consideration of Characteristics and


National Archives. Records of the defense civil preparedness agency. Retrieved June 1,

National Climate Data Center (2009). Retrieved December 29, 2009 from:
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent–storms

National Fire Academy (2003, September). Executive fire officer program operational policies and procedures applied research guidelines. Emmitsburg, MD: Author.


Shaw, W.J. (1999, October). The fire chief as the emergency manager in a small


http://quickfacts.census.gov/qfd/states/27/2743000.html


http://censtats.census.gov/data/MN/1602730140.pdf


http://www.ifpo.org/articlebank/developing_emergency_response.html


Zhao, Y., (n.d.). *Some countries’ practice of emergency management*. Graduate School of Chinese Academy of Sciences; Li jimei: Shandong University School of Management.


Appendix A

**MN Homeland Security and Emergency Management**

**Professional Certification Training Check List (2010-2011)**

FEMA independent study courses take 8 hours each maximum to complete. Most are finished in 4 hours or less. 

(*) = number of course hours

**FEMA Independent Study Courses** – can be downloaded free of charge at [www.training.fema.gov/is/](http://www.training.fema.gov/is/)

[ ] IS001 Emergency Manager: An Orientation to the Position (8)
[ ] IS022 Are You Ready? An In-depth Guide to Citizen Preparedness (8)
[ ] IS100 Introduction to Incident Command (or IS100.HC, IS100LE, IS100.PW or IS100.SC) (8)
[ ] IS120.A An Introduction to Exercises (8)
[ ] IS130 Exercise Evaluation and Improvement Planning (8)
[ ] IS200 ICS for Single Resources and Initial Action Incidents (or IS200.HC) (8)
[ ] IS288 The Role of Voluntary Agencies in Emergency Management (8)
[ ] IS393.A Introduction to Hazard Mitigation (8)
[ ] IS547 Introduction to Continuity of Operations (COOP) (8)
[ ] IS700 National Incident Management System (NIMS), An Introduction (8)
[ ] IS800.B National Response Framework, An Introduction (8) (or IS800 or IS800.A)

**Professional Development Series (PDS) Courses – Independent Study (IS Code) or Classroom (G Code)**

The IS courses can be downloaded free of charge at [www.training.fema.gov/is/](http://www.training.fema.gov/is/)

[ ] IS230 Principles of Emergency Management (8)
[ ] IS235 Emergency Planning (8)
[ ] IS240 Leadership and Influence (8)
[ ] IS241 Decision Making and Problem Solving (8)
[ ] IS242 Effective Communication (8)
[ ] IS244 Developing and Managing Volunteers (8)

Corresponding **PDS Capstone Seminar Workshops** must be taken if the FEMA independent study course was completed in the section above. If the classroom (G-code) course was taken, the PDS workshop is not required. The PDS Capstone Seminar Workshops are conducted in the classroom. You cannot register for these workshops without first providing proof of completion of the corresponding FEMA IS-code independent study course.

PDS240 Leadership and Influence (8) (prerequisite: IS240)
PDS241 Decision Making and Problem Solving (4) (prerequisite: IS241)
PDS242 Effective Communication (4) (prerequisite: IS242)
PDS244 Developing and Managing Volunteers (4) (prerequisite: IS244)

Classroom Courses
Classroom courses are located under the Training and Education link on the HSEM website at www.hsem.state.mn.us. Under the sub-categories list, you will find a Calendar of Events/Training link that will detail all courses, dates, and locations for the current federal fiscal training year, October 1 – September 30.

G191 ICS/EOC Interface (8) (prerequisite: IS100 and IS200)
G202 Debris Management (16)
G288 Donations Management (8)
G386 Mass Fatalities Incident Response (24) (prerequisite: IS100 and IS200)
G650-1 New Director’s Workshop (8)
HSEEP-1 Homeland Security Exercise Evaluation Program (24)
Subject: Emergency Management Survey

From: Jeff Siems <jeff.siems@gmail.com>
Date: Wed, 1 June, 2011
To: Undisclosed recipients
Subject: Emergency Management Planning Survey

Hello,

I am conducting research as part of an Executive Fire Officer project for the National Fire Academy and I am looking for your assistance. I am researching how communities address their Emergency Management planning and response. I have attached a link to the survey which consists of nine questions and takes only a minute or so to complete. My goal is to get as many responses as I can within a two month period. Your opinions and views are important to my research. Please take a moment to complete this survey. Your results will be kept confidential and added to those of others. Simply click on the link below to begin the survey.

You may also cut and paste the link into your browser:
http://www.surveymonkey.com/s/FH68JFM

If you would like to view the results of this survey, please feel free to contact me. I have included my contact information below.

Thank you,

Jeff Siems
Edina Fire Department
jsiems@ci.edina.mn.us
Jeff.Siems@gmail.com
952-807-2531
Appendix C

Survey Results

1. Which best describes your current position?

- Other
- Paramedic/EMS
- Law enforcement
- Fire Officer
- Firefighter
- Emergency Manager

Answered question = 25  Skipped question = 0

2. Which best describes the population of the community you represent?

Answered question = 25  Skipped question = 0
3. Which best describes the organization you represent?

Answered question = 25  
Skipped question = 0  

Other: Fire/EMS Private Contract Services = 1  
Health Care System = 1  
healthcare emergency management (sic) = 1  
Fire service- combination poc/full time (sic) = 1  
Combination paid and volunteer. = 1
4. To the best of your knowledge, who is most responsible for emergency management/preparedness duties for your community?

Answered question = 25

Skipped question = 0
5. In your opinion, who do you believe is best suited to perform Emergency Management/preparedness duties in your community?

Answered question = 25
Skipped question = 0

Other:
Combination of Police and Fire = 1
Anyone that has an understanding of EM operations. = 1
Could be any agency Director
6. Which best describes your organization's involvement in Emergency Management/preparedness activities?

- 76% - 100%
- 51% - 75%
- 26% - 50%
- 0% - 25%

Answered question = 25
Skipped question = 0
7. In your opinion, please identify the characteristics, components and concepts that best identify an Emergency Management/preparedness program. (Please mark all that apply).

Answered question = 25

Skipped question = 0

Other = 6

Self Sustaining = 1

Community oriented, innovative, dedicated = 1

Training = 1

Multiple agency/multiple jurisdiction = 1

Training and practice scenarios = 1

risk analysis, budget administration, public education = 1
8. In your opinion, how complete is your Emergency Management program?

- I am not aware of any Emergency Management program.
- We have a partial Emergency Management program in place and/or it is outdated.
- We have a complete Emergency Management program in place but it is outdated.
- We have a complete, updated Emergency Management program in place.

Answered question = 25  
Skipped question = 0

9. Which best completes this statement: "The last time we used our Emergency Management/preparedness plan was..."

- Within the last year.
- 5-10 years ago.
- 10+ years ago.
- Never.
- Other = 1

Answered question = 25  
Skipped question = 0

It will be updated July 22, 2011.
Appendix D

Personal interview with Mike Nibbe conducted by Jeff Siems

Name: Mike Nibbe
Current position: Police Lieutenant/Emergency Management Coordinator, Edina, MN
Date: July 20, 2011
Time: 1428 to 1545
Type: Personal interview
Location: Edina Police Department - office

1. **What is your name, position and responsibilities?**
   
   Police chief Jeff Long is the director and manager of the emergency management for the city of Edina. I assist Chief Long as the coordinator of emergency management which means I develop the EOP’s (emergency operation plan), drills and power points for training. I am also the person that usually represents the city at committees and meetings. I must tell you though that we (police) direct traffic but you (fire) do all of the cool stuff like dealing with explosions, fires and rescues.

2. **Tell me about your responsibilities and duties as the cities Emergency Management director?**
   
   Like I said, I am responsible for maintaining the cities emergency operations plan and doing the behind the scene type things like making sure the tornado sirens function.

3. **How much time and energy do you devote to Emergency Management duties?**
   
   This is a tough question to answer because I can go months without doing anything related with emergency management and then get swamped with duties related with it. Like right now I have about six different to-do’s on my dry erase board. I would say that over the course of a year I devote approximately five (5%) percent of my time with emergency management related items and tasks.

4. **Do you feel that enough time and energy is devoted to Emergency Management functions and duties.**
   
   As long as nothing happens, then yes. It’s reasonable right now but remember that our plan hasn’t been tested. I’d say that we’re getting by but not moving forward. I’d have to say that we are putting more time into it than the last administration. One barrier that we have in devoting more time and energy is the support of other departments. For example, we have a template for a Continuity of Operations Plan (COOP) that is about sixteen pages long. The problem is none of the other department heads want to complete a sixteen page long document that may or may not ever get used. Obviously, a full time position would be much better for the city.

5. **Who do you feel would best be able to perform Emergency Management planning (police, fire, separate dept…)?**
   
   Let’s see, Plymouth police run their emergency management but otherwise it is predominantly administered by either fire or police and fire cooperation. Most of the surrounding cities have the fire department run their emergency management because that’s what you do every day on every call. I mean you guys (fire) really know NIMS (National Incident Management System) where we (police) do a good job of perimeter
control. I think that a coordinated or shared responsibilities model would work best for Edina. We would be able to have a unified command in planning and coordination of services. We work hand-in-hand on emergency scenes why not in planning?

6. **What is the Emergency Management budget?**
I am not paid for doing the job of emergency management coordination. However, part of the police chief’s salary is earmarked for time spent on emergency management duties and responsibilities. Currently $37,347 are (sic) routed to Jeff Long (police chief). Additionally the emergency management has $1,800 for professional fees, $1,400 towards continuing education, $5,850 dedicated to service contract – this is where I have my sirens monitored and maintained – and $8,000 in supplies and consumables. I’ll let you add all that up. (Total = $51,397). We also have some funds pass through emergency management such as grant monies. For example we were able to fund the public health department and public works with 800 megahertz radios with UASI grants that we funneled through emergency management.

7. **Is there anything else you care to add?**
When things fall apart, people will work together to accomplish the task of restoring our community. Why not EM planning? One thing Chief Long did want me to let you know is that “we’re not giving up anything”. If you want to be a part of the planning process you will have to get your own funding.
Appendix E

Personal interview with Ed Coppersmith conducted by Jeff Siems

Name: Ed Coppersmith
Current position: Deputy Fire Marshal/Emergency Management Director, Chanhassen, Minnesota
Date: July 29, 2011
Time: 0830 to 0910
Type: Personal interview
Location: Chanhassen fire station

1. **Please tell me your name, position and job responsibilities?**
   My name is Ed Coppersmith and I am the emergency preparedness planner and coordinator for the city of Chanhassen. Emergency management is one of my collateral duties. My primary title is Deputy Fire Marshal and city safety manager.

2. **Tell me about your responsibilities and duties as the Emergency Management director?**
   I am in charge of emergency planning for the city; assuring the infrastructure is intact and business, corporation and residence COOP (continuity of operations planning). My essential function is to ensure the EOP (emergency operations plan) is current. Hazards don’t change but resources and contacts do change. I also ensure key personnel are properly trained but that does not include the police or fire. I conduct drills, assist other communities during events they experience, conduct planning and education sessions and am responsible for the coordination of our plan with county and state plans. Most importantly, I attend training to keep me updated.

3. **What concepts, components or characteristics do you believe are essential in developing an effective Emergency Management program?**
   It is important that the plan you put in place coordinates with the concepts at the national level and make sure they work at the state level. You do a lot of plagiarism to make your plan and take the best from others. You talk to other emergency planning folks and coordinate plans. You eyeball your city for unique hazards. For example we have Pillsbury here and they have an awful lot of chemicals on site so we have that to contend with. You check with railroads that travel through your community. Most importantly you need to network with your respective peers.

4. **How important is it for the fire service to be involved in EM planning?**
   Totally important! It should be your primary agency involved with emergency planning duties. I feel it is just a fire department thing. When a police officer is off duty, he puts his gun down, his uniform away and is off duty. But a fire fighter is always on duty. They wear a pager twenty-four hours a day, seven days a week. If you look down any street you see fire hydrants. This is a great example of preparedness planning. What you don’t see is police call boxes or anything related to law enforcement pre-planning.
5. **How much time and energy do you devote to Emergency Management duties?**
On a day-to-day basis I’d say about five to ten percent. If it isn’t broke, you don’t fix it. During the spring time with all of the flooding concerns or during special events I may be devoting fifty to seventy-five percent of my time. Again, you will spend more time initially until you feel comfortable with your program.

6. **Do you feel that enough time and energy is devoted to Emergency Management functions and duties?**
Yes I do for my specific responsibilities. Yes for the statewide planning. The best recent example I can give you is when the I-35-W bridge collapsed. No one ever planned for the bridge to go down, but we had a very good all-hazard plan in place that was adapted to work when the bridge fell. I believe this is cited as a best practices example of proper emergency management.

7. **Who do you feel would best be able to perform Emergency Management planning (police, fire, separate dept...)?**
I think it should be somebody in the fire service. Maybe not the fire chief but someone in the upper echelons, a battalion chief or assistant chief. It involves a combination of administration and operations so it shouldn’t be a training chief.

8. **What is the Emergency Management budget?**
I do not have a specific line item or departmental emergency management budget. Mainly because there are very little expenditures in emergency management other than training, which comes out of the fire department budget, and the yearly contract for maintenance of our tornado sirens.

9. **What department is your position pay-rolled through?**
As I said, there is no emergency management budget or even a line item for this. My salary is through the fire department budget and all of the training is funneled through the fire department budget too. I am also in charge of the safety systems in place for the city and that is also a fire department budget item.

10. **Is there anything else you care to add?**
Regardless of which department has emergency management duties, there must be continuous training and training funding for emergency management. There are too many little things that change on a year-to-year basis. The fire department is used to using incident command and we are accustomed to being available twenty-four hours a day. This makes the fire department well suited to handle emergency management duties and responsibilities. Good luck on your research. I hope it goes well for your paper.
Author Note

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I would like to thank my family and fellow co-workers at the Edina Fire Department for their patience, understanding and commitment to my successful completion of the National Fire Academy’s Executive Fire Officer Program. I would like to express my gratitude for assuming additional responsibilities while I was concentrating on this project. It is greatly appreciated.

I would also like to thank individuals such as Mr. Mike Nibbe, Mr. Edward Coppersmith, Mrs. Karen Mackey and Mrs. Maggie Heinen Shea for their input contributing to this research paper. I would like to thank the survey respondents for their insight.

I am grateful for all of the programs, curriculums and best practices the National Fire Academy supports and encourages. Many fire departments do not have the resources available to develop such relevant and useful programs on their own. The ability to utilize these resources at little or no charge is very much appreciated.

I alone accept responsibility for any errors or omissions in this article.

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