Incident Command Dysfunction at Large Scale Incident—What IMT Staffing Model Can Improve Effectiveness?

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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 language, ideas expressions and writings of another.

Signed: ________________________________
Abstract

The problem was Mundelein Fire Department had no access to an incident management team for deployment to large-scale incidents. Moreover, the county in which the Village of Mundelein resides did not have an incident management team available to local entities for assistance at large-scale incidents. Not having access to this type of team can compromise a community's ability to effectively manage large-scale incidents. The author used the descriptive research method to address the stated problem. The author collected information from literature reviews, conducted interviews with experienced, local incident management team members and collected results of surveys from the local fire service community. The intent of these recommendations was to reduce the potential for loss of life during large-scale incidents through planning and development of an incident management team.
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Introduction

The capability to manage large-scale incidents has grown in importance over the past decade. The magnitude of these events has affected our country on several fronts; responder safety, service to victims affected, and the ability for the community to rebound from the effects of the incident. Events such as the attacks on the World Trade Centers, Hurricane Katrina, and the Oklahoma City Bombings are classified as large-scale events. While these types of events have world-wide consequences, local events can have the same devastating effects on communities. Several events have taxed local entities in Illinois, the Utica tornadoes, Ethanol train derailment in Cherry Valley, and a college shooting on the campus of Northern Illinois University. The major difference between success and failure in managing a major incident is the ability to draw nation-wide assistance in the form of incident management expertise to assist in the mitigation of the incident. During local incidents, the ability to request this type of assistance is established haphazardly or in the case of the Village of Mundelein and Lake County, the availability of an incident management team was nonexistent. The purpose of this research paper was to determine what type of incidents would require the deployment of an Incident Management Team (IMT). Can local entities staff their own IMT without assistance? What type of training requirements would be required for participants? What personnel resources would be available to meet these requirements? Lastly, what are the advantages of a single source IMT versus a multi-agency IMT?

The descriptive research method was used to establish the benefits of an IMT for the Mundelein Fire Department (MFD) and Lake County to determine the most effective type of team, the training levels for team members, and to establish accepted models and guidelines for
the development of a long-term, successful Incident Management Team. The research focused on answering the following research questions:

1. What are the specific incidents that would require the deployment of an Incident Management Team?

2. Can the local fire departments provide staffing for a local Incident Management Team deployment?

3. Are area agencies willing to commit and participate in a multi-agency, NIMS compliant Incident Management Team?

4. What are the qualifications and guidelines that should be followed for selecting personnel to be part of a Type 4 Incident Management Team?

5. What are the advantages for the Mundelein Fire Department to use a single agency versus a multi-agency Incident Management Team?

Background and Significance

The Village of Mundelein (Village) in Lake County, is a northern suburb of Chicago, Illinois with an area of 10 square miles that has a permanent population of 40,000 people. The Village’s current population does not show an increase in daytime population, but does show constant population during business and evening hours. The Village has a diverse structural community that is comprised of a mixture of residential, commercial, light and heavy industrial. The village is different from most communities because it has several large open land plots that are slated for development in the near future. These plans include the development of several large, commercial retail chain occupancies. The Village is also is experiencing growth in new
residential communities and revitalization of the downtown areas. Currently, the Village is poised to break ground on two major single-family sub-divisions and a major high-rise complex of the south border of the Village that will include the construction of three high-rise buildings. Mundelein is comprised of a broad spectrum of social and economic residents including a large Hispanic-American population. The diversity in occupancy types and residents poses several challenges to the MFD. These challenges include language barriers, increasing senior population, and an increasing population of physically challenged residents. All of these challenges require the MFD to develop specific programs or alter existing programs to meet the needs of the community.

The MFD is a full-service fire department that provides fire suppression, Advance Life Support (ALS) emergency medical services, technical rescue, hazardous materials response, a full service fire prevention bureau, a developing public education division and disaster management which includes a Citizens Emergency Response Team (CERT). The MFD is comprised of 29 career fire suppression personnel, 7 contracted personnel, and 4 administrative personnel operating out of two fire stations. The current MFD fleet consists of three engine companies, one ladder company, one shift command vehicle, and four ambulances. The daily shift assignment (24/48 schedule) consists of nine personnel (1 Lieutenant and 1 Firefighter/Paramedic assigned to each station and 1 Battalion Chief assigned to Station 1). The MFD is an active participant in automatic aid and mutual aid with neighboring fire departments throughout the region and state. The MFD responds to 3500 requests for service annually with an estimated 75% emergency medical and 25% fire or other service-related.

Mundelein is in the middle of a growth period in the development of the Village. While the growth has been stymied by the recent economic downturn, when the economy reengages the
development is anticipated to accelerate at an even faster pace. With this growth and anticipated growth, a revitalization of the Mundelein’s downtown is planned. Due to limited space in the downtown area, most of the growth is anticipated be accomplished by the construction of high-rise buildings. The Village has already begun the high-rise construction process with the first building built in 2007. This structure is a seven-story condominium building with 84 occupancies.

The urgent need for this research and results are not related solely to the Village’s future. This research could also have a significant effects on one of the most rapidly developing counties in Illinois and potentially southern Wisconsin. The Village of Mundelein located in Lake County, in northeastern Illinois, with Lake Michigan to the east, Wisconsin to the north and the City of Chicago to the south. The county has a significant level of diversity in areas from rural communities, highly developed urban centers, wealthy suburbs, and tourist areas. The 2008 census showed an estimated population of 713,000 (U.S. Census, 2007) and projected to increase to 786,000 by 2020. The county is currently 1,368 square miles of which 920 square miles are water. The bodies of water include Lake Michigan and 170 other lakes, streams and rivers. Currently, twenty-six different fire departments and the Lake County Emergency Management Group service Lake County.

The Mundelein Fire Department (MFD) and other entities in Lake County have shared in recent events which taxed the local resources and required mutual aid assistance from other agencies and counties. These events have included flash floods, major fires, long-term dive incidents, tornadoes, and significant snowstorms. Effectively managing these events quickly overwhelmed a single Incident Commander and the single agencies attempting to manage these incidents. Fortunately, resources were a simple obstacle to overcome. All fire entities in Lake
County are members of the Mutual Aid Box Alarm System (MABAS), which gives Incident Commanders access to a significant resources. The breakdown occurred in the management, deployment and support of these resources. A single Incident Commander could not deploy, track, restock and replace resources in an effective manner, which lead to depletion of resources and long-term loss of services to those affected by the incident.

Currently, the Lake County Office of Emergency Management (LCOEM) has a limited number of personnel to staff an Incident Management Team (IMT) and as a result a county-wide IMT is not available. Local entities have limited numbers of trained personnel that could respond and be utilized during these events. With the lack of a county team and the potential resources external to the county, a need was recognized to develop and establish an IMT with trained staff and resources to manage future events.

This research project relates to the third course of the Executive Fire Officer Program, Executive Analysis of Fire Service Operations in Emergency Management (EAFSOEM), the author attended at the National Fire Academy. The course purpose is “to prepare senior fire officers in the administrative functions necessary to manage the operational components of a fire department effectively.”(USFA, NFA, 2009a). The primary objective would be to establish an IMT to focus on proactive risk reduction by responding appropriately and in a timely manner to emerging issues relating to the purpose of the Executive Fire Officer Program (USFA, NFA, 2008).

Literature Review

The literature review for this Applied Research Paper (APR) located a significant amount of material and the material contained many differing opinions on the subject. The main priority
of this review was to attempt to find common practices and opinions that are proven to be
effective by the global fire service and apply those concepts and methods to attain foundation
material to answer the research questions of this ARP.

In the development of this ARP, the first discussion is what type of incidents may require
the deployment of an IMT? For entities that have never used or have limited experience with an
IMT, the definition of a large-scale event must be clearly defined. In emergency management
parlance, all incidents are classified as either emergencies or disasters. These terms have rough
parallels to wild land fire incident complexity levels and have strict legal definitions related to
qualify for Federal disaster assistance under the Robert T. Stafford Disaster Relief and
Emergency Assistance Act (42 USC 5121, et seq.) (Keller, 2005). Haraway (2009) offers large-
scale incidents typically develop in one of two ways: a smaller incident that escalates into a large
incident because of weather conditions, delayed response, lack of resources, or poor initial
management; or a large incident that is a major event from the start. Examples of these types of
incidents would include natural disasters, major hazardous materials releases, terrorism, or civil
disorders. Andersson (2002) supports Haraway stating when an emergency of regional
proportions is occurs, and local resources for managing the disaster have been stretched to the
limit, support in the form of an IMT can turn “chaos back to normalcy”. In reviewing the
literature this author found several opinions on the specific elements of events may require
deployment of an IMT. The elements found were through critical lessons learned from
participants in these events. Those lessons showed similar areas of focus should be considered:
1. A breakdown or overwhelming of an Incident Commander, 2. Communication breakdowns, 3.
Lack of planning, 4. No resource management, 5. Lack of public relations or information
(Donahue & Tuohy, 2006). Through the literature review and lessons learned from reviews of
incidents, the Incident Commander reiterated the need to forecast the potential of the incident and identify the potential for failure in any or all of these five areas of breakdown. Once the Incident Commander identified the potential of a breakdown, there must be a resource available to request for assistance. That assistance is an IMT. Harbour (1998) found that leadership is a key in any successful venture and especially critical in incident management. Krejci and Lester (2007) found that one of the primary component missing from the Hurricane Katrina disaster response was leadership. Simply put, the system was not set up to allow leaders to provide effective guidance. USFA Fire Administrator Paulison (2007) stated:

“Recent events have demonstrated clearly, the fire service can no longer think of responding to emergencies just in their own communities. Throughout the United States, fire departments are increasingly being asked to assist each other in order to protect American citizens. When multiple fire departments work together at an emergency scene, issues of command structure, communications, and personnel safety must be coordinated.”

The literature reviewed revealed that the more complex incidents become, the more critical the need for assistance in managing the incident, essentially offering a team of trained, experienced individuals is essential for success.

In the literature review, staffing and training of personnel were identified as essential elements for the success of an IMT. Fundamentally, local, state, and Federal responses were uncoordinated, often late, and many issues of jurisdictional authority and resource allocation were being worked out even as the disaster was unfolding (Krejci & Lester, 2007). These findings ask the question of what type of staffing is the best suited for a new IMT? (FEMA,
identified serious preparation and coordination were required for the continuous planning, resource allocation, and training of a successful IMT. Most fire departments and emergency management agencies are facing challenging economic times and staffing shortages, thus these types of commitments are unrealistic. In establishing a new IMT, a truthful review of staff training and availability for deployment is essential to meet the requirements to maintain an IMT. Hence, collaboration among Federal, state and local governments is essential for the development of optimal plans for disaster response (Krejci & Lester, 2009). Krejci and Lester continued to offer anything less than real collaboration would squander valuable resources. United States Fire Administration (USFA) All-hazards Incident Management Curriculum (2009) states, “every municipality needs to have access to an IMT, but not every emergency response agency needs to have their own IMT.” Most incidents are managed local responders within a single jurisdiction (USDHS, 2008). Through the literature review, there is a necessity when managing a large-scale incident to evaluate whether personnel can adequately staff an IMT. Additionally, if the essential positions cannot be staffed, where will the jurisdiction seek assistance? Lusk (2006) offers an appropriate plan is to begin with a Type 4 IMT and then plan and train for progression into a Type 3 team.

When developing a new IMT a critical element requiring attention is what type of IMT will be developed. The literature review found several recommendations for typing an IMT. The United Stated Department of Homeland Security (USDHS) found that most incidents could be managed locally and are typically handled by local emergency management response personnel within a single jurisdiction (2008). As an incident escalates, the IMT responding must be of the correct type to assist the Incident Commander in need. The Federal Emergency Management Agency (FEMA) through USDHS (2005) has identified capabilities for five
different types of IMTs that comply with the National Wildfire Coordinating Group’s (NWCG) standards (2006). The United States Fire Administration (USFA) (U.S. Fire Administration [USFA], 2008a) recognized the NWCG standard and identified the five levels of IMTs for response to complex incidents. These typing levels are:

Type 5: Local Village and Township Level: A group, usually fire officers from a local department that fill the Command and General Staff positions for 6-12 hours.

Type 4: City, County or Fire District Level: A team of fire, EMS, and law enforcement personnel, generally from a single jurisdiction with a larger population, that manage a major emergency, usually 6-12 hour duration.

Type 3: State or Metropolitan Area Level: A standing team from various agencies and jurisdictions that responds to incidents in the State, or large regions thereof, for multi-operational periods.

Type 2: National or state level: Federally- or state-certified team that responds to incidents that could have state or national impact. The team is not fully equipped or self-contained.

Type 1: National and state level: Federal and state level: Federally- or state-certified team, currently operated though the U.S. Forest service, which responds to incidents with greater magnitude than a Type 2 emergency. The team is fully equipped and self-contained.

The literature reviewed offered that most new IMTs begin as a Type 5 and evolve from that point and progressing into a more developed team as need and experience levels increase. Lusk (2006)
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recommends that an appropriate plan is to begin with a Type 4 IMT and then progress to a Type 3 team. This is supported by an International Association Fire Chiefs (2004) news article, in which Deputy U.S. Fire Administrator and former chief of the Pittsburg Bureau of Fire is quoted as saying ‘The operations of IMTs are highly dependent of the local community needs, available resources and the level of training and expertise.’

For an IMT to be successful, no matter the type, the literature review found there must be commitment to the success of the team. The USFA (2004), in a report to a fire post 9/11, recommended that a regional IMT may be the solution for small departments with limited resources that need or may have the need to manage a large or complex incident. Incident management teams are a concept that has been used in emergency management for many decades especially by the United States Forestry for wild land fires (Smith, 2009). The literature review identifies if leader of an organization is not familiar or experienced with the concept of an IMT, that individual must be educated to understand the IMT or know where to gain an IMT for assistance to their Incident Commanders. These teams bring organizational and technical capabilities for disaster response and mitigation (Molino, 2006). The literature review maintains that an organizational leader who does not support the concept or refuses to use an IMT can cause the failure of the team as a whole. Lack of support will present a problem as team dynamics will influence incident management and teamwork during abnormal operations requiring a high degree of anticipation and consistency to achieve maximum efficiency (Bea, 2008).

In the literature review, training was identified as an essential function in an IMT. Richter (2002) enforced this point stating trained and experienced people could make the command system run smoothly. Lusk (2006) identified in his ARP that training is the key issue in the
development of an IMT. The NIMS Integration Center (NIC) (USDHS[2005]) has issued a detailed training scenario for command and general staff to have in order to achieve NIMS compliance. The schedule does not show requirements for training levels between the different levels of teams. The required classes are:

- FEMA IS-700: NIMS, Introduction
- FEMA IS-800: National Response Plan, An introduction
- ICS-100: Introduction to ICS or equivalent
- ICS -200: Basic ICS or equivalent
- ICS-300: Intermediate ICS or equivalent
- ICS-400: Advanced ICS or equivalent

The USFA has developed training standards for the different team members of an IMT. These standards were published in National Incident Management System (NIMS) Alert, (USFA, 2007) that outline includes the following standards:

Per NIMS all responders who may serve in command or general staff must have ICS 100 through 400; IS 700 and IS 800

Local IMT’s (Type 4 and 5) should have Command and General Staff for Local IMT’s.

All-Hazard IMT’s (Type 3) should have an All Hazard IMT class, field training, and position-specific training.
Type 2 and 1 IMT’s need to have performance-based training elements indentified by the NWCG.

Wilkie (2008) identified in his ARP that the National Fire Protection Association (NFPA) will be developing standard 1026 in 2009 and will serve as an additional standard in the job performance requirements for IMT roles. NFPA 1561(2008) mandates to maintain team effectiveness, personnel must receive position specific refresher training annually for each specific position of an IMT. Additionally, NFPA 1561 recommends a full-scale drill or functional exercise each year. Parker (2009) offered that realistic training keeps the interest of the team. Parker also offered an excellent recommendation that trying not to over build or over train a team was crucial to success. Parker’s comments on training reinforce the findings of Smith (2009) who found when an organization has to use less than qualified individuals, their lack of experience in managing an incident can result in a less than desirable outcome. Smith also identified that just because individuals are leaders of their agency, this does not necessarily mean that the individual is trained or qualified to serve in the command and general staff functions during a large-scale incidents.

The literature identified that most incidents are managed locally and handled by a single jurisdiction (USDHS, 2008). This made the author question what are the potential advantages of a sole source IMT versus a multi-agency team. NFPA 1561 (2008), Section A.3.3.20 states that the IMT is designed to “support the existing incident management system (IMS) organization for events that exceed local capabilities.” The standard further states “the local jurisdiction can request the IMT to assume the overall management of an incident.” The literature review identified some Incident Commanders or organizational leaders have shown a concern that by using an IMT will cause them to lose their decision-making ability for their incident. The
literature revealed this could not be further from the mission of an IMT. The USDHS (2008) stated that such a team was structured to provide incident management assistance to complement and support the existing IMS organization. Research found that one of the benefits of utilizing an IMT to manage a complex or large-scale incident is that these individuals have trained and worked together, increasing the speed and proficiency of incident stabilization (Smith, 2009). USFA (2008) concurs with Smith’s research and found a multi-disciplined team can provide a wide range of resources either to enhance operations with infrastructure support or to transition to an incident management function that includes both command and general staff. The operations of an IMT are very dependent upon the local communities ability to establish, control, and train at the local level (Molino, 2006). If local communities can come together in order to manage complex incidents, public and responder safety will greatly improve.

**Procedures**

The research procedures used in preparation for this ARP began with a literature review at the NFA’s Learning Resource Center in January 2010 while attending the Executive Analysis of Fire Service Operations in Emergency Management (EAFSOEM) course. This author used the descriptive research methodology to answer what type of IMT would best serve the Lake County fire departments in order to increase effectiveness at large-scale incidents.

This author used an extensive literature review to research the topic of IMTs. The information was gathered through an extensive search at the NFA’s Learning Resource Center, which included national standards, trade journals and other previous Executive Fire Officers’ ARPs. This author looked for commonalities in opinions, successes in the development of newly formed IMTs and lastly noted learning points offered from newly formed IMTs. Also used was
the internet to search the term IMTs, to further support or that conflicted with sources from the NFA’s Learning Resource Center. Through the literature review this author was able to begin developing a foundation to answer research questions posed in this ARP.

Three personal interviews were conducted via E-mail. The first interview conducted was with Battalion Chief Forest Reeder of the Pleasantsview Fire Protection District, LaGrange, Illinois (Appendix C). A second interview conducted was with Chief David Christenson of the Bloomingdale Fire Protection District #1, Bloomingdale, Illinois (Appendix C). A final interview conducted was with Chief Ron Pieri of the Highwood, Illinois (Appendix C). These chief officers were selected for several reasons. The paramount reason was all are involved with successful Illinois IMTs. Chief Christenson and Chief Reeder were selected for their involvement developing new IMTs in a MABAS division that did not have access to this type of team. Chiefs Christenson and Reeder were able to offer successes and failures with implementing their teams along with opinions how to develop a newly forming team into success.

In addition to determine levels of commitment and a develop practical foundation for this ARP, a survey was conducted. The survey (Appendix A) was E-mailed to the membership of the Lake County Fire Chiefs Association. The survey was conducted to identify when local fire chiefs may request an IMT, can the surveyed department staff a sole-source IMT without outside resources, what are the local agencies training levels and were the chiefs willing to commit to a multi-agency IMT. The entirety of the Lake County Fire Chiefs Association were surveyed, 26 total departments. These departments provide a variety of staffing from complete volunteer staffing through full career-staffed departments. Survey began April 16, 2010 and closed June 1, 2010. As of the closing date 20 departments had completed the surveys resulting in a 77% return
rate. The survey was critical to answering research questions 2 and 3 of this ARP. The survey results are included in Appendix A.

Limitations

This author identified potential limitations in the interview and survey portions of this ARP. The interview identified two potential limitations. The first limitation was none of the interviewed subjects were nationally credentialed individuals; they were local success stories in Illinois. The interviewed subject’s opinions and comments could be interrupted as success stories for just Illinois. The second limitation was the total completeness of the answers. Were the interviewees dealing with time constraints and rushed through the interviews.

Another limitation identified was the lack of a 100% response. Of the surveyed fire departments across Lake County, there was only a 77% return of the surveys. This could be interpreted as not a true opinion of the county. This author felt with a 77% return on the survey, foundation opinions could be made on the topic of this ARP.

Definition of Terms

Incident Management Team (IMT): The Incident Commander and appropriate Command and General Staff positions assigned to a large-scale incident. Mutual Aid Box Alarm System (MABAS): MABAS is a partnership with Illinois Emergency Management Agency (IEMA) that establishes a state-wide, non-discriminatory mutual aid response system for fire, emergency medical services, and specialized incident operational teams.

National Incident Management System: Establishes standardized incident management processes, protocols, and procedures that all responders – Federal, state, tribal, and local – will
use to coordinate and conduct response actions. NIMS will enable responders to work together to effectively manage incidents.

NIMS Integration Center (NIC): The entity created by the Department of Homeland Defense to provide direction and oversight of the NIMS system.

Results

Research question number one: What are the specific types of incidents that would require deployment of an IMT? The answer to this question was developed from all three areas of research described in the Procedures Section of this ARP. The types of incidents that may require an IMT were not defined but the circumstances that are a part of the incident are well-defined. The main function of the IMT is to return chaos to normalcy when an incident is overwhelmed or resources are not available to assist a stricken community (Andersson, 2002). An IMT can have success when deployed post-incident when emergency responders are attempting to handle the fall-out from the incident; the IMT can have success when deployed to an incident as an event is occurring; lastly and a new concept to IMT deployment is establishing the IMT pre-event. The deployment of an IMT pre-event has evolved though many learning experiences identified through the literature review. The City of Chicago has learned lessons from major events such as the City of Chicago Marathon, City of Chicago Fourth of July Festivities and the Taste of Chicago. These events draw tremendous crowds of visitors and have the potential to overwhelm the City’s resources quickly. Through lessons learned, the City of Chicago Office of Emergency Management will activate a citywide IMT, which remains in place until the conclusion of the event.
The survey conducted of the Lake County fire departments found agreement with the results of the literature review. The survey revealed 58.8 percent of the surveyed departments would request an IMT for a multiple alarm fire, 82.4 percent would request an IMT for a fire that involved a fire fighter rescue or fatality, 82.4 percent would request an IMT for any specialized emergency operations such as dive or hazardous materials incidents. This author found the most surprising result from the survey in the pre-incident questioning for IMT deployment. Of the departments surveyed, 94.1 percent stated they would use an established IMT pre-event with a high potential for emergency events.

There were some differing opinions from the interviewees on when the IMT should be deployed. In the Chief Reeder interview (Appendix C) the MABAS Division Ten protocol for deployment is much more aggressive than either of the other divisions. Chief Reeder did reveal in the interview he felt because of the large number of deployments by the Division 10, that the team was able to work together more and achieve more successes as a team. Additionally, in the protocols for deployment of an IMT, MABAS Division 12 is much more aggressive, stating “a full IMT will be deployed to any box alarm incident” (Appendix D). The MABAS Division 3 and 12 IMTs have not been in place as long as the Division 10 IMT. Both interviewees from Division 3 and 12 stated that as experience levels increased and frequency of use on large-scale events increased the demand for the IMT deployment would increase as well. Currently, the Division 12 IMT can be requested at the second alarm level emergency incident and is automatically deployed at the third alarm level. The request for the Division 3 IMT’s deployment is left to the authority have jurisdiction as to when an IMT can be requested. As the author reviewed the survey data, an ironic situation developed. The southern border of Lake County abuts Division 3 and those departments surveyed wanted to use the IMT more often and
made available quicker for quicker deployment. It appeared to this author there may be a misunderstanding of when to use the team.

Research question 2 asked if the local fire departments can staff their own IMT without the use of outside resources? Merryfield (2008) found that creating and fluid implementation of an IMT might arise as a common problem for a community that currently does not have one. As stated in the problem statement of this ARP, the Mundelein Fire Department nor Lake County has access to an IMT resource. The need for an IMT was identified in the survey results conducted by this author. One of the questions asked in the survey was would Lake County would benefit from an IMT? The result were 100% that the county would benefit. However, when asked in the survey if their organization could staff an IMT without outside resources, 76.5% could not provide the staffing. Lastly, of the surveyed jurisdictions, 98% believe a local, multi-agency from various disciplines would provide the best service to the Lake County departments. The survey did support the findings that typically smaller jurisdictions often have the training in incident management; however, they do not have the command resources necessary to manage major incidents (NFPA 1561, 2008).

Research question three asks; are local agencies are willing to commit and participate in a multi-agency, NIMS compliant incident management team? The USFA (2004), in a report to the fire service following 9/11, suggested that a regional IMT may be the solution for small departments with limited resources that need to manage a larger or complex incident. This concept is taken a step further when Molino (2006) states these teams bring organization and technical capabilities for disaster response and mitigation. When Lake County officials who were surveyed, found that 70.5% of the officials either had experience, knowledge, or some experience and some knowledge of an IMT. A more significant concern was found that 29.4%
of the officials had some knowledge, but no experience with an IMT. This author believes the lack of experience could be attributed to the lack of access to an IMT for the county. Smith (2009) found making sure that the organization can access the appropriate qualified individuals from other agencies can make a difference in the outcome of an incident and to responder safety. The survey results found that 94.1% of Lake County officials have trained personnel that would support Smith’s opinion by providing trained staff to an IMT and 100% of those surveyed would allow those personnel to participate with an IMT deployment.

Research question four discusses the qualifications and guidelines for the selection of personnel to a Type 4 IMT. The literature review, survey, and interviews conducted by this author provided supporting information to answer this research question. The literature review found several opinions regarding the credentialing of IMT members. This author found that credentialing and training are terms used synonymously in the discussion of selection of personnel qualifications for an IMT. Lusk (2006) did identify that training is a key issue in the development on an IMT. The NFPA confirmed the essential need for training and in 2009 provided NFPA 1026 that provides a standard for identifying job performance requirements for position specific IMT roles. The NIMS Implementation Center (NIC) has developed curriculums for the educational process and the USFA has developed a USFA Roadmap for implementation of training for members of an IMT. NIMS alert (United States Fire Administration, 2007) stated that all Type 5 and Type 4 Teams must have NIMS 100, 200, 300, 400; ICS 700, 800 and should have Command and General Staff Functions for Local IMTs. The referenced NIMS alert is in direct conflict with the findings found in NFPA 1561 (2008) and Lusk (2006) who found that the credentialing of personnel should be left to the authority having
jurisdiction for each position in an IMT. The only mandated issue found in NFPA 1561 (2008) was refresher training be provided annually for an IMT and its members.

The survey conducted by this author regarding the topic of credentialing found a consistent answer. The Lake County departments stated 100%, there must be a credentialing system in place for the selection of members and for team consistency. Of the departments surveyed 52.9% had all their personnel trained to NIC standard, 41.2% had believed some personnel trained to the NIC standard, and only 5.9% had no personnel trained to the NIC standard to operate in an IMT. After the survey data was reviewed and compared to the literature review information, this author felt the need to include a credentialing question as part of the personal interviews conducted. The results from this question would effectively answer how successful MABAS IMT credentialing was handled.

Using the personal interviews, each MABAS representative was asked the same questions regarding member selection and credentialing members. The specific results of the interviews can be found in Appendix C and several consistencies were found. The first consistency was each authority having jurisdiction developed as part of their standard operating procedures a standard for specific positions on the team. The second consistency found all three interviewees had used NFPA Standard 1561 and NIC’s recommendations for the training of personnel. The last consistency found from the interviews and the literature review was an agreement in the mandated refresher training from NFPA 1561. The only inconsistency found was how often the mandated training occurred. As referenced earlier in this ARP, NFPA 1561 (2008) stated yearly refresher training was required. The interviewer found inconsistencies ranging from teams that trained monthly, another trained yearly and to one that trained as needed or when new members were assigned to the team.
The fifth and final research question defined whether the MFD could staff an effective IMT, using no outside resources to staff a team. The most accurate information for this question was found in the literature review and surveys of the Lake County fire departments. In the literature review a statement offered by the USDHS (2008a) stated that most incidents are managed locally and handled by a single jurisdiction. This statement caused this author to question if there was a potential to staff a sole source IMT with MFD personnel and not tax outside resources. In the literature review, Andersson (2002) discusses an emergency of regional proportions occurs and local resources for managing the disaster have been stretched, support from an IMT can turn “chaos back to normalcy.” Haraway’s (2009) findings discussed earlier in this ARP revealed two means by which large-scale incidents develop quickly due to several specific factors. The two most notable factors pertinent to this ARP research question were a lack of resources or poor incident management that are root causes in incident management failure. Wilke’s (2008) ARP identified that there are limited numbers of personnel in local entities to support an effective IMT.

The findings from this survey supported the literature review in stating that 76.5% of the fire departments in Lake County could not sole-source staff an IMT for an operational period greater than twelve hours. Additionally, 100% of the surveyed departments would support a multi-jurisdictional IMT. The support comes from shortage of staffing and the opinion that a more diversified staff would provide a more effective decision making process. This author interpreted those comments as a more effectively trained staff would make better decisions and mitigate an incident quicker and safer. These findings support theory of returning “chaos back to normalcy” (Andersson, 2002).

Discussion
The methods used to research and answer the posed questions in this ARP found pertinent information relevant to identify the need for and development of an IMT for the Village of Mundelein and Lake County, Illinois. Several recent events and drills have taxed local entities to the point where management efficiency and effectiveness are lost and the potential safety of residents and responders compromised. Through all the literature review, it is abundantly clear that an IMT must be deployed when local resources and personnel have been exhausted. Additionally, because the current economical environment local entities are experiencing the loss of staffing resources, there simply are not enough command officers to staff all required functions at large-scale incidents. Local entities must evaluate if the appropriate staff level positions can be established to deal with the everyday incident. As identified in the literature review, incidents develop in two ways, small scale that grows into a large-scale or an event that starts as a large scale. If the event is small and grows or is already large-scale incident and local entities have exhausted, resources on the initial response, failure to control the incident is eminent.

The primary purpose of an IMT is to bring an incident under control effectively and efficiently (Douglas & Short, 2008). As part of the research for this ARP, a survey of local entities was conducted and a significant amount of support was found to develop, implement and lastly maintain a functional IMT. A very interesting point was identified using an established IMT for deployment to major scheduled events as a precursor to any emergency incident at a major event. The survey identified local entities would support the deployment of their trained personnel to another stricken community as part of an IMT. The most important part of the survey, identified local entities would have no issue requesting the IMT on specific types of
incidents and would support use of an established, trained IMT to assist in management of their incidents.

The research noted several different levels of IMTs defined by DHS. The responsibilities of the team levels differ significantly. The research identified the first step in developing an IMT is to assess the types of potential hazard exposure to the community. When the potential hazards have been identified, the implementation of the proper level of team can be decided. The survey conducted by this author offered several types of incident responses allowed to offer additional types of requests for an IMT (Appendix A). A properly trained and staffed IMT will have a positive effect on any event or emergency incident (Hoppe, 2007). As part of the research for the ARP, three personal interviews were conducted to get a true understanding how local IMTs were responding and functioning. The author interviewed three members of different MABAS IMT teams who either had a role in the development of a team or were currently members of a team. The interview results (Appendix C) found common incident types their IMTs were responding to and commonalities in policy and procedures. The interviewees offered that standardized procedures were essential to development of a successful team.

The last research area identified the need for a foundation level of training, continued training and lastly credentialing of members for specific functions within the IMT. Douglas and Short (2008) found that an IMT that has previously worked, trained, and developed together would be ideal. Individual team members would have under taken formalized training directly relative to their particular IMT role. Through the interview process, this author was given the MABAS procedures and these procedures were reviewed at length. All three MABAS Divisions have very specific selection criterion and procedures for applying for membership to the team. The USFA IMT Training Roadmap (2003) also gives specific guidelines for the training of IMT
members which correlated with the MABAS policies. A properly trained and staffed IMT is sure to have a positive effect on any event or emergency incident (Hoppe, 2007).

Recommendations

The problem as stated for this ARP is that the Mundelein Fire Department had no access to an IMT for deployment to large scale incidents. Not having access to this type of team can compromise a community’s ability to effectively manage large-scale incidents. The research from this ARP clearly identifies the need for a team. This author offers the following recommendations to develop a successful IMT. The recommendation for incidents to which the team should be deployed remains with the authority having jurisdiction. MABAS does offer a basic recommendation for incidents which exceed a twelve hour work period. However, an additional recommendation would be anytime local resources are taxed or an Incident Commander is overwhelmed, a request should be made for the IMT.

The second recommendation would the formation of a Type 4 multi-jurisdictional IMT. The secondary goal should be established for this team to develop into a Type 3 team because of the potential service to Wisconsin. Due to the proximity to the Wisconsin border and for additional staffing and resources, Lake County should offer a partnership to the Wisconsin borders in the development of this team. The Mundelein Fire Department does not have the resources to staff all positions of a functioning IMT. Similarities throughout the county were found when this author reviewed the survey data. No departments have the in-house resources to completely staff an IMT for an operational period that exceeds twelve hours. This plan would require the use of outside resources of equipment and personnel to be effective. All the
departments surveyed offered support in the form of personnel and equipment to a functional IMT. These offers of support would be critical to the support of this plan.

Based on this study, recommendation for training of personnel would be to follow the USFA IMT Roadmap for development of training requirements for the IMT. Additionally, this author would recommend the adoption of policies and procedures from operating MABAS IMTs which are functionally appropriate for the Lake County team. Furthermore, the recommendation of this author to would be to incorporate the MABAS team criterion and procedures for selection of team members that have proved successful (Appendix D). Continued on-going training is critical to the success of this IMT. Team leaders are selected must understand the importance of continued training for members and must not be reluctant to remove a member that is not meeting the requirements for training. Lastly, standards for participation and training must be part of the policy and procedure manual for any IMT. Team leaders must make team members comply with all adopted standards. In an actual incident when FEMA dollars are on the line for victims, is not the appropriate time to identify deficiencies in training or credentialing.

In conclusion, no advantages could be found for Mundelein to use a single-source IMT. The current staffing in Mundelein does not allow consideration of this option. This author surveyed the county in which Mundelein is located and found 100% of the departments were in the same dilemma, none of the entities surveyed could provide sufficient staffing for a complete IMT. This lead to the sole recommendation that an IMT for Lake County must be multi-jurisdictional for success. The recommendation for a multi-jurisdictional IMT should not be considered solely due to staffing. This study found that a multi-jurisdiction IMT offers many critical elements for success. Research identified as a collective group the IMTs would ideally have spent considerable time in training to ensure cohesiveness in operations. The reality is that
many IMTs do not have these luxuries (Douglas & Short, 2008). If a local jurisdiction can provide sufficient staffing, the entity must select personnel that are trained and experienced to operate as part of an IMT. Lastly, as the essential need to manage complex incidents effectively increases due to lack of staffing and to ensure funding for victim recovery is received; access to a well trained, competent IMT is a necessity whether the IMT provided at the local, county or state levels.
References


U.S. Fire Administration, FEMA. (2008a, March). *Establishing an Incident Management Team.* Retrieved January 12, 2010 from

http://www.usfa.dhs.gov/fireservice/subjects/incident/imt/imt-developing.shtm


http://www.usfa.dhs.gov/fireservice/subjects/incident/imt/all-hazrad.shtm


Appendix A

Incident Command Dysfunction at Large Scale Incident—What IMT Staffing Model Can Improve Effectiveness Survey Questionnaire and Results.

1. I am familiar with the concept and functions of an Incident Management Team.
   - 52% of the respondents had knowledge of an Incident Management Team
   - 17.6% of the respondents had some knowledge and/or experience with an Incident Management Team.
   - 29.4% of the respondents had some knowledge and no experience with an Incident Management Team.
   - 0% of the respondents had no knowledge and experience with an Incident Management Team.

2. I feel Lake County would benefit from a local Incident Management Team.
   - 100% of the respondents agreed that Lake County would benefit from having access to a local Incident Management Team.

3. Based on my personal knowledge and experience with Incident Management Teams, I feel my agency would support the development of a local Incident Management Team.
   - 88.2% of the respondents would strongly support the development of a local Incident Management Team.
   - 0.0% of the respondents would support the development of a local Incident Management Team, with limitations.
   - 11.8% of the respondents would support the development of a local Incident Management Team.
   - 0% of the respondents would not support the development of a local Incident Management Team.

4. If effected by a large scale event, beyond local MABAS capabilities; I believe my agency is capable of staffing all the Command Staff ICS functions (incident command, operations, planning and logistics) and the General Staff (Safety, PIO, Liaison) positions for more than one operational period (more than 12 hours) without assistance.
   - 11.8% of the respondents agreed they the could staff all positions used in a local Incident Management Team.
11.8% of the respondents agreed they could staff all required positions in an Incident Management Team, with some limitations.

76.5% respondents disagreed and felt their organization could not staff all positions required for an Incident Management Team to function.

5. I feel a local Incident Management Team should consist of local members from multiple agencies from various disciplines.

52.9% of the respondents strongly agreed a local Incident Management Team found be made from local members from various disciplines.

41.7% of the respondents agreed a local Incident Management Team found be made from local members from various disciplines.

0% of the respondents strongly or simply disagreed a local Incident Management Team found be made from local members from various disciplines.

6. Local Incident Management Teams (e.g. Type 4/3 Teams) members should meet the minimum training requirements established by FEMA and USFA for the specific position of an Incident Management Team.

58.8% of the respondents strongly agreed Incident Team members should meet the training requirements established by FEMA and the USFA.

47.1% of the respondents only agreed Incident Team members should meet the training requirements established by FEMA and the USFA.

0% of the respondents disagreed or strongly disagreed Incident Team members should meet the training requirements established by FEMA and the USFA.

7. I feel my agency could provide trained personnel to serve on a local Incident Management Team.

52.9% of the respondents felt strongly they could provide staff to serve on a local Incident Management Team.

41.9% of the respondents felt they could provide some staff to serve on a local Incident Management Team.

5.9% of the respondents felt they could not provide any staff to serve on a local Incident Management Team.

8. I would be willing to allow personnel from my organization, who are trained to participate in a local Incident Management Team’s training, drills, and deployments.

100% of the respondents would support members of their organization participating with a developed Incident Management Team.
9. Our organization would use or consider the use of a local Incident Management Team for the following types of incidents (choose all that apply).

- 58.8% of the respondents would use the Incident Management Team for multiple alarm fires.

- 82.4% of the respondents would use the Incident Management Team for fires with special hazard; i.e., RIT deployment, firefighter fatalities, incident overwhelms the incident commander, or large-scale brush fires.

- 82.5% of the respondents would use the Incident Management Team for hazardous materials incidents.

- 82.4% of the respondents would use the Incident Management Team for technical rescue incidents; i.e., trench, confined space, dive incidents.

- 94.1% of the respondents would use the Incident Management Team for special events with a potential for emergency incidents; i.e., concerts, conventions, protests or fairs.
Appendix B

Incident Command Dysfunction at Large Scale Incident—What IMT Staffing Model Can Improve Effectiveness Interview Questionnaire.

1. What is your responsibility regarding implementation of your MABAS Division’s Incident Management Team?

2. What type of Incident Management Team is in your MABAS Division?

3. How long has the MABAS Team been existence?

4. What level of training was required to create the Division’s Team?

5. What kind of on-going is required to sustain membership on the team?

6. How did you initially choose members for the Incident Management Team?

7. How do new members join the Incident Management Team?

8. How do you choose members for each Incident Management Team position?

9. Has the Incident Management Team Been deployed to an incident?

10. Is there any advice you can offer to a developing Incident Management Team?

11. What has the successes and benefits of your Incident Management Team?
12. Have there been any failures and how have you corrected the issues?

13. How do you keep the members interested and focused on the team?

14. What qualifications and training would you recommend for any members of a MABAS Incident Management Team?
Appendix C

Incident Command Dysfunction at Large Scale Incident—What IMT Staffing Model Can Improve Effectiveness Interview Answers from Deputy Fire Chief Ron Pieri, Highwood Fire Department, Highwood, IL (MABAS Division 3 IMT), Chief David Christensen, Bloomingdale Fire Protection District #1, Bloomingdale, IL. (MABAS Division 12), Battalion Chief Forest Reeder, Pleasantview Fire Protection District, LaGrange, IL. (MABAS Division 10).

1. What is your responsibility regarding implementation of your MABAS Division’s Incident Management Team?

Pieri: None, Division 3 Chiefs implemented the team. The Team was started as an incident Over-site Committee and developed into an incident management team.

Christensen: Was appointed as a member of the MABAS Division 12 development/steering committee for an Incident Management Team.

Reeder: Was appointed to the team to develop policies and in-service training for the Incident Management Team.

2. What type of Incident Management Team is in your MABAS Division?

Pieri: MABAS Division 3’s team in a Type 3 team.

Christensen: MABAS Division 12’s team is a Type 4/3.

Reeder: MABAS Division 10’s Team is a full Incident Management team with specialty functions of RIT Chiefs, Plans Chiefs, Staging Chiefs, Rehab Chiefs and Safety Chiefs.

3. How long has the MABAS Team been existence?

Pieri: Division 3’s Team has been in existence for 3-4 years.

Christensen: Division 12’s Team has been existence since 2007.

Reeder: Division 10’s team has been in existence for 10 years.

4. What level of training was required to create the Division’s Team?

Pieri: Division 3 requires IS 300 and 400 or NIMS Command and General Staff.
Christensen: References the MABAS Division 12 Policy and Procedure Manual (Appendix D) section 3.1, that requires ICS 300 and 400 or Command and General Staff, an Incident Safety Officer class.

Reeder: Initial certification and application for IMAT membership. All applicants are screened and attend classroom/practical scenarios before they receive full activation status. All applicant receive 4-8 hours of training per position.

5. What kind of on-going is required to sustain membership on the team?

Pieri: No on-going training is required to maintain membership on the team.

Christensen: References the MABAS Division 12 Policy and Procedure Manual (Appendix D) section 3.3, that requires attendance at 7 of the 9 drills per year.

Reeder: MABAS Division 10 requires recertification at all positions annually. Recertification consists of a written examination and practical assessment.

6. How did you initially choose members for the Incident Management Team?

Pieri: I believe members were selected who applied and were at the battalion chief or higher levels.

Christensen: References MABAS Division 12 policy (Appendix D) section 1.1, 1.2 and 1.3, which states qualified chief officers must be from Division 12 and submit an application for considerations.

Reeder: Division 10 screens members according to established criteria Division 10 Training Officers and the SOG committee.

7. How do new members join the Incident Management Team?

Pieri: New members can join through an application and acceptance procedure through MABAS Division 3 Chiefs.

Christensen: References the MABAS Division 12 Policy and Procedure Manual (Appendix D) section 1.2 that requires applications to be submitted annually in November for consideration and appointment in January.

Reeder: MABAS Division 10 makes applications available once a year. The applications are then screened as outline in Question 6.

8. How do you choose members for each Incident Management Team position?

Pieri: MABAS Division 3 rotates positions in the team monthly.

Christensen: MABAS Division 12 positions are assigned on certification level, with a secondary position assigned as a back-up.

Reeder: As members are needed vacancies are filled. Some appointments are made on the availability to respond.
9. Has the Incident Management Team Been deployed to an incident?

**Pieri:** The MABAS Division 3 team has had several deployments and estimated 5/6 times a year.

**Christensen:** The MABAS Division 12 team has deployed 4 times. One incident greater than a 12 hour work period, others incident were for a single work period.

**Reeder:** MABAS Division 10 has had numerous deployments notably to every box alarm since 2000.

10. Is there any advice you can offer to a developing Incident Management Team?

**Pieri:** Offered to make sure there is a communications vehicle with all essential equipment any time the IMT is deployed to an incident.

**Christensen:** None offered.

**Reeder:** Offered to screen your applicants, train new members and re-train the members of the team and make all members advocates and mentors of the team.

11. What has the successes and benefits of your Incident Management Team?

**Pieri:** Offered to talk with members who have used the team. Those department included the Northbrook Fire Department who used the team for a train derailment and the Prospect Heights Fire Department who used the team for a plane crash. Both departments felt the team offered a balance to the incident command staff for decision making, resource allocation and lastly as liaisons for all the outside organizations flooding the command post.

**Christensen:** None offered.

**Reeder:** The MABAS Division 10 Team brought standardization of functions, safety back-ups systems.

12. Have there been any failures and how have you corrected the issues?

**Pieri:** None offered.

**Christensen:** None offered.

**Reeder:** Tiered response and back-up continues to be a problem, lack of availability and distance of response. Lastly, lack of activity for the team continues to be a problem.

13. How do you keep the members interested and focused on the team?

**Pieri:** No opinions offered.
**Christensen:** No opinions offered.

**Reeder:** All members know the importance of the roles of the IMT, it almost manages itself.

14. **What qualifications and training would you recommend for any members of a MABAS Incident Management Team?**

**Pieri:** References the answer from question number 4, but also the Office of the State Fire Marshal officer certification.

**Christensen:** None offered.

**Reeder:** Follow NFPA 1500, 1561, 1026 guidelines. I personally believe that the Blue Card certification should be mandatory for all IMAT personnel. I recommend balancing certifications with real incident experiences. Rank will assist in some position, but not critical for all positions.
Subject: Division 12 Incident Management Team (IMT)

Purpose & Scope:

The purpose of the IMT is to provide assistance as needed at incidents that occur within Division 12. The team is established to be a Type 3 or 4 team with an expected incident duration of one to two operational periods.

Form(s): Incident Management – 1 – IMT Box Card

1. Membership

1.1 The IMT team will consist of qualified chief officers of departments within Division 12.

1.2 Applications will be accepted annually. Interested chiefs are to submit their application in November so that the IMT Box Card can be updated in December.

1.3 The Division team members may also function within an established county or state-wide team.

2. Positions

It is expected that the stricken department will provide for the following positions: Incident Command, Operations, Liaison, Finance, and Public Information. The Division 12 IMT team will consist of a minimum three positions: Planning, Logistics, and Safety.

These positions can be briefly described as:
2.1 **Planning:** Responsible for the collection, evaluation, dissemination, and use of information about the development of the incident and the status of resources. The Planning Chief predicts the probable course of events and prepares alternate strategies and control operations. Prepares the Incident Action Plan (IAP).

2.2 **Logistics:** Responsible for facilities, transportation, supplies, equipment maintenance, fueling, feeding, and personnel medical and rehabilitation. Works closely with DuPage County DHS.

2.3 **Safety:** The Safety Chief develops and recommends measures for assuring personnel safety and to assess overall hazards. Will oversee safety officers operating at incident.

2.4 Expanding the incident for the relief of the IMT or to a type 2 team should be considered for incidents that will involve multiple operational periods and/or resources

3. **Training**

3.1 IMT team members must have the following training:

   Command and General Staff (CGS) or ICS 300 and 400
   Unified Command IS 700 and 800 recommended
   Incident Safety Officer (State, FDSOA, or NFA) for Safety Chief

3.2 Monthly Training and Meetings will take place at 1045 hours following the MABAS Division 12 Monthly Meeting of the Board of Directors.

3.3 It is required that IMT Members attend seven (7) of the nine (9) training/meetings. Two (2) of the seven (7) can be outside courses that are approved by the IMT Members. If a MABAS Division 12 Board of Directors Meeting is cancelled so will the IMT training/meeting be cancelled and the required hours will be prorated.

4. **Activation**

4.1 It is recommended that the Division 12 IMT be activated;

4.1.1 At the 2nd alarm box level for commercial, industrial, and multi-family

4.1.2 At the 2nd alarm level for technical rescue incidents, including but not limited to, dive, structural collapse, trench, confined space, high angle.
4.1.3 At the 3rd alarm level for residential incidents.

4.2 The IMT can be activated at the request of the any IC or through the EOC of any stricken Division 12 community.

4.3 The division will be divided into two sections so that a team activation draws members from an unaffected area. It is expected that DuPage County MOC-1 will be on scene or enroute.