

**Multiple-Department Training for the Fire Departments on the Western End of
Lake County, Ohio**

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A research project submitted to the Ohio Fire Executive Program

September 28, 2011

CERTIFICATION STATEMENT

I hereby certify that the following statements are true:

1. 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 writings of another.

2. I have affirmed the use of proper spelling and grammar in this document by using the spell and grammar check functions of a word processing software program and correcting the errors as suggested by the program.

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ABSTRACT

The cities in the western half of Lake County Ohio have experienced an increase in the use of mutual aid and automatic mutual aid without a comparable increase in coordinated training among the participating fire departments. This research project answered the following questions: 1. What can the participating fire departments do to prepare their firefighters to work with neighboring departments? 2. How familiar are fire department members with neighboring departments' equipment and response capabilities? 3. What Standard Operating Guidelines should be adopted and subsequently used as a basis for a training guideline?

Permission was granted by all of the fire chiefs from the participating departments to conduct this action research project. Information was obtained through the use of focus groups, personal communications, and review of NIOSH Line of Duty Death reports. Also included were professional consulting firm reports, policy and procedure manuals, fire department annual reports, and an online survey. The results of the survey showed that over 80 percent do not routinely train with neighboring departments.

Other fire departments that were studied in this research project had a coordinated approach to training, operations, and standard operating guidelines involving mutual aid departments responding together. The Line of Duty Death reports studied cited uncoordinated operations and communications as one cause that contributed to firefighter fatalities in three instances.

The recommendations resulting from this research project included: 1. Defining and agreement on Standard Operating Procedures. 2. Agreement on minimum response requirements. 3. Providing response area coverage allowing fire companies to attend training

sessions in other jurisdictions while on duty. 4. Develop a post-incident analysis procedure to determine the effectiveness of each incident requiring multiple department response.

The fire departments in western Lake County would benefit from a single standard operating guideline, consistent methods for requesting mutual aid, and a coordinated response from neighboring communities when responding outside jurisdictional boundaries.

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INTRODUCTION

Statement of the Problem

The problem is that an increase in mutual aid responses has not been met by a corresponding increase in training among the communities who respond together to emergencies. The goal of this research is to address operational downfalls, consistency, and efficiency through training.

“Mutual aid companies should train together and not wait until an incident occurs to attempt to integrate the participating departments into a functional team. Differences in equipment and procedures need to be identified and resolved before an emergency occurs where lives may be at stake” (Sealy, Feb 2003).

The Willoughby Fire Department, for example, saw a 33% increase in Mutual Aid and Automatic Mutual Aid responses from 2007 to 2009 (Willoughby FD, 2009 Annual Report). Lake County has a formal Mutual Aid Box Alarm System (MABAS) and most departments also utilize some form of Automatic Mutual Aid (AMA). However, the frequency and necessity to use MABAS and AMA differs in each department and the use of each is dependent upon many officers who serve as incident commanders.

Purpose of the Study

This research will be used to improve multiple-department response to emergencies through coordinated training on standardized response, incident command procedures, and fire ground practices that will produce more efficient operations.

The Fire Departments in the cities of Eastlake, Kirtland, Mentor, Mentor-on-the-Lake, Wickliffe, Willowick, Willoughby, and Willowick have agreed to participate in this applied research project. Permission was granted by the fire chiefs of these departments to perform this research and report the results.

Research Questions

The action research method was chosen for this applied research project, and will answer the following questions:

1. What can the participating departments do to prepare their firefighters for working with neighboring departments?
2. How familiar are fire department members with neighboring departments' equipment and response capabilities?
3. What Standard Operating Guidelines should be adopted and subsequently used as a basis for a training guideline?

BACKGROUND AND SIGNIFICANCE

The cities in the western end of Lake County that have agreed to take part in this research project include: Eastlake, Kirtland, Mentor, Mentor-on-the-Lake, Wickliffe, Willoughby, and Willowick. These fire departments, combined, serve nearly 140,000 residents in approximately 83 square miles and include 13 fire stations, 179 career personnel, 221 part-time personnel, and respond to over 19,000 emergency incidents annually (See Table 1). The departments vary in size from the largest, the City of Mentor Fire Department, at 28.5 square miles and 5 fire stations staffed by 77 career and 51 part time firefighters to the smallest, the City of Mentor-on-the-Lake Fire Department, at 1.5 square miles and 1 fire station staffed by 5 career and 25 part time firefighters. A full-time fire chief leads each department and each department supports an individual fire prevention and training division.

Table 1

City	Sq. Mi.	*Population	Fire Stations	Career / Part Time members	2009 Call Volume
Eastlake	6.5	20,255	1	29 / 0	2,700
Kirtland	30	6,670	2	9 / 39	955
Mentor	28.5	50,278	5	77 / 51	6,513
M-O-T-L	1.5	8,127	1	5 / 25	900
Wickliffe	4.68	13,484	1	20 / 17	2,173
Willoughby	10	22,621	2	39 / 25	4,522
Willowick	2	14,361	1	0 / 64	1,850
TOTAL	83.18	135,796	13	179 / 221	19,613

*According to 2000 Census.

On June 28, 1990, the Lake County Chiefs' of Fire adopted the Mutual Aid Box Alarm System (MABAS) "...to establish an orderly response of mutual aid to stricken communities within Lake County, Ohio." (Lake County MABAS, 1990). Most departments currently utilize a portion of the MABAS system called Automatic Mutual Aid (AMA), which calls for one or two fire companies that are assigned to the applicable MABAS box in lieu of calling for a full MABAS response (See Appendix 1, Fig. 1-4). The use of AMA allows the dispatch center in any city that receives a report of a fire (with pre-established criteria such as: multiple calls, confirmed smoke or fire showing, or persons trapped) to immediately contact pre-determined units in close geographic proximity to the incident location. The difference in the use of each is as follows: if AMA is used, the dispatcher from the city with the incident immediately calls, via phone, the communities highlighted as AMA to respond with a designated resource directly to the incident scene. If a MABAS box is requested, the host city contacts Mentor Fire Dispatch via phone with information on the incident, location, and designated staging area. Mentor Fire Dispatch in turn transmits a tone, which is heard throughout the county that alerts individual city dispatchers to reference the box assignment and subsequently dispatch the appropriate resources. MABAS and AMA is organized based on hazard class ranging from Low, Medium, and High Hazard. Low Hazard boxes are typically used for single family residential, Medium Hazard boxes for multiple-family residential and small commercial occupancies, and High Hazard boxes are called for occupancies such as multiple occupancy commercial, hospital, and industrial facilities (See Appendix 1, Fig. 1-4). The MABAS and AMA requirements for each community vary based on the size and staffing of a given fire department; for example the City of Kirtland staffs two fire stations with only 2-3 personnel in each station, while the City of Mentor staffs

five fire stations with 4-7 personnel per station. The use of MABAS and AMA is strictly dependant on the incident command officer on any given department. Although individual departments train on the use of the MABAS system, it is up to the initial incident commander to use the most beneficial system based on their judgment of the severity of the incident; this situation lends itself to considerable inconsistencies due to the number of officers who respond as incident commanders. The use of mutual aid and automatic mutual aid is inconsistent among the participating departments mainly because of the variety of each area served; the City of Mentor typically does not request additional outside resources due to the department's size and ability to handle the majority of incidents with on-duty staffing, while the other cities routinely request outside help due to their smaller size and limited staffing. It should be noted though, that no department alone in the described area can guarantee a consistent number of personnel responding on the initial alarm of fire due to the volume of emergency medical service calls that inevitably lower the staffing in any station at any given time.

Table 2 shows the use of mutual aid and automatic mutual aid responses from the communities; those that proactively use the system have seen an increase.

Table 2

Mutual Aid and Automatic Mutual Aid Responses from 2007-2009

	2007	2008	2009
Eastlake Fire Department	89	128	153
Kirtland Fire Department	104	101	138
Mentor Fire Department	51	42	64
Mentor-on-the-Lake Fire Dept.	24	22	35
Wickliffe Fire Department	92	110	135
Willoughby Fire Department	176	185	235
Willowick Fire Department	81	86	86

The departments participating in this research respond to incidents in a variety of occupancies and building types and each department has Standard Operating Guidelines for the needs of the individual community. Some of the individual differences in response areas include but are not limited to the following: it is common to find buildings of ordinary and balloon frame construction in the cities of Wickliffe and Willoughby, whereas it would not be as common to find this construction type in Eastlake and Willowick. All of the cities involved have a certain percentage of commercial occupancies; the City of Mentor, however, has one of the largest retail and manufacturing bases in the State of Ohio which results in the necessary adjustment for incident commanders to utilize the appropriate building fire procedures. Response to the cities of Wickliffe and Willowick require hose coupling adapters because their

hydrants are equipped with Cleveland Standard threads, while hydrants in the remaining cities utilize National Standard threads. Also present throughout the entire area is variety of multiple family dwellings such as condominiums, townhouses, garden apartments, and high-rise apartments. Of the seven cities involved in this project, there are six different radio channels; other departments' radio channels are easily accessible and there is the ability to request a fire ground or tactical channel if requested. However, although the current radio system has the capability, there is no predetermined fire ground channel and any radio traffic at an incident is subject to interruption for additional routine emergency responses. There are four different brands of Self Contained Breathing Apparatus (SCBA) used in the participating departments, which could create difficulty for a Rapid Intervention Team (RIT) in the event one should be deployed at a fire scene where firefighters from another community wearing a different brand SCBA become lost or is subject to equipment malfunction. It was shown in a survey distributed to all officers in the participating departments that the majority of those who responded are only somewhat familiar with these differences between the communities their departments border and respond into. The lack of widespread knowledge of these conditions can create delays and inconsistencies in incident command, strategy, and tactics and could potentially result in firefighter injuries and fatalities. The study of multiple NIOSH Line of Duty Death reports cite the lack of coordinated response and training as reasons that contributed to firefighter deaths.

There has been no consistent formal training *between* the area fire departments to support operations and command procedures when and where MABAS and AMA are used and how to assign and deploy resources that rapidly arrive from surrounding communities.

LITERATURE REVIEW

The literature review used in the preparation of this research paper included journal articles, city fire department annual reports, NIOSH/CDC Firefighter Fatality Reports, policy and procedure manuals, an online search of fire department standard operating guidelines, interviews, focus group meetings, and personal communication.

Typically, mutual aid agreements are made between fire departments where there is a need for additional resources. It begins with the fire chiefs of the participating communities sharing an idea of expectations of neighboring departments' response to incidents, which is then followed by a more official agreement between political entities. As written in the article, "*Multi-Company Training – Part I*" (Sealy, Feb 2003) this is the point where firefighters then wait for an incident to occur that requires mutual aid for assistance. The problem, he states, is that the scene of an emergency is not the time to find out how the "other guys" do it and discover problems such as incompatible equipment. He goes on further, in Part II of his series (Sealy, Apr 2003), to state that there are many questions that must be answered such as, who are the people in neighboring departments? What is their level of training? Are they trustworthy? Do our firefighters have to take orders from their chiefs and officers? And do they know what they are doing? Arguably, these are important considerations as the safety of department members depends on the performance and competency of neighboring fire departments.

There are two main elements that are discussed in both parts of Sealy's articles: physical and human elements. The *physical* elements are those that deal with operations and equipment. It is important to identify operational procedures of the mutual aid companies. Equally important are the types of equipment carried on fire apparatus. Are there compatible hose

connections? What types of hose lays, pump pressures, and basic signals are used to charge the hose lines? What kind of terminology is used; typical fire service jargon or department-specific jargon? What accountability systems are in place? And finally, what are the differences in command procedures? The *human* element involved is one of trust. When firefighters encounter firefighters from other departments, especially in emergencies, they want to be confident during emergencies with the skills in the people that they will be working with and this is accomplished by training together and preparing for emergencies in a controlled, non-emergency setting (Sealy, Apr 2003). It should be clear that mistakes that are made in training are not ridiculed, rather they are corrected and the member(s) having difficulty is helped and shown the proper way. After all, when working in a true emergency situation, the same people involved have their lives depending on each other's performance.

The next step in researching this topic was finding out what other departments were currently involved in multi-department training. In a story printed in the Sun Post-Herald, a newspaper serving communities in the suburbs west of Cleveland, Ohio, a consultant was hired to study combining emergency services for seven communities ("Westshore Fire District", 2010). The company, Emergency Services Consulting International (ESCI), was hired for the project. Emergency Services Consultants International (ESCI) is a consulting firm that specializes in public safety. The Villages of Morton Grove (MGFD) and Niles (NFD), Illinois Fire Departments contracted ESCI for a feasibility study on regional fire protection (ESCI report, 2006). The contact person was consultant Phil Kouwe; an email was sent to him requesting information if any other departments were involved in anything similar to this proposed research project. Mr. Kouwe suggested contacting the Morton Grove, Illinois Fire Department (P. Kouwe, personal communication, April 26, 2010).

Contact was made with Morton Grove Fire Chief Tom Friel and District Chief Frank Rodgers; Chief Friel forwarded a copy of the ESCI recommendations that included area departments and combined response and training (T. Friel, personal communication, June 8, 2010). Titled, “Regional Fire Protection Feasibility Study for the Villages of Morton Grove and Niles, Illinois”, this study contained numerous objectives to improve the two departments. Objective Nine of this report specifically detailed the training program. It was observed that both departments make an effort to train cooperatively and that training together increases the efficiency of both departments. The study also showed that by combining the agencies’ training, the cooperative training program would have greater depth using the same or fewer resources while benefiting from a larger talent pool. ESCI also stressed that standard operating practices were needed to improve fire ground safety and efficiency. Similar to the situation presented in the western portion of Lake County, the ESCI report states, “Each agency must devote a significant portion of limited financial and personnel resources to remain compliant. Each department duplicates the efforts of the others by independently fulfilling the requirements of law and rule.” The report further suggests, “Many communities increase fire department training efficiency by pooling the resources of a number of agencies into a regional training program. Cooperative programs offer greater depth, yielding a uniform training curriculum using the same or fewer total resources. The adoption of standard operational practices leads to improvement in safety and efficiency on the fire ground. By taking advantage of the larger talent pool of regional training programs, greater effort is devoted towards teaching and learning specialized skills” (ESCI report, 2006).

Tim McGrath, PhD from the McGrath Consulting Group, Inc. performed a similar study

for the fire departments near Lisbon, Wisconsin (T. McGrath, personal communication, July 28, 2010). Lisbon, Wisconsin Fire Chief Douglas Brahm was contacted and responded by providing information on five area departments that have an inter-municipal agreement (D. Brahm, personal communication, July 30, 2010). The fire departments serving Lisbon, Hartland, Stone Bank, North Lake, and Okauchee, Wisconsin have an agreement called, "Bark River Emergency Services." The agreement identifies the need for standard operating procedures and identical responses to allow interchanging of personnel and units to each department's response area. The Bark River agreement has also started a trend for mounting fire equipment in the same location on every fire apparatus and setting up medical bags the same for all EMS units. The Bark River system shares instructors and provides monthly training for all of the involved departments; any department member can attend training at any other department to satisfy the requirements of the agreement. The chiefs and training officers meet every six months to critique the training and operations from the past six months and lay out the training and goals for the future six months. The chiefs then forward the results to the instructors who in turn form lesson plans for the five departments' training needs. The cost of the training is shared among the five departments, which resulted in no profit or loss experienced by any of the departments. Chief Brahm states that their automatic mutual aid system has benefited the departments by using common company operations, and the training has become accepted by the officers as participation continues (D. Brahm, personal communication, July 30, 2010).

Another area that has utilized combined training is an area near Cincinnati, Ohio. Named the Northeast Fire Collaborative, it combines the fire departments serving Blue Ash, Loveland, Sharonville, Sycamore, and Symmes Township's. The agreement was formed to provide safer fire ground operations by training firefighters and sharing assets through agreed policies and

standard operating guidelines, all while each department maintains its own identity. According to Loveland-Symmes Fire Department Deputy Chief Josh Blum, the collaborative training work group meets every other week to discuss and develop lesson plans and training programs. All of the training lessons that are developed are completed among all departments within the collaborative; these training sessions include one joint training exercise each month (J. Blum, personal communication, June 28, 2010).

Taking the importance of multiple-department training to an extreme, several CDC/NIOSH Fire Fighter Line of Duty Death reports were examined and found to recommend that departments that operate in mutual aid situations train together:

On November 29, 2003 a 31 year-old volunteer Massachusetts firefighter died while fighting a basement fire in which at least four volunteer and two career fire departments responded (CDC/NIOSH, F2004-02). Among many contributing factors was the lack of training among the involved departments. The fire was in the basement of a 103 year-old 2-1/2-story balloon-frame residential occupancy. The tactics that were used in attempt to extinguish the fire lacked coordination among crews and operating on multiple radio channels compromised fire ground communication. Recommendation #5 in the report states, “Mutual aid companies should train together and not wait until an incident occurs to attempt to integrate the participating departments into a functional team” (Sealy, Feb 2003). The report further suggests that departments should agree on methods and procedures; develop training protocols and subsequent joint training sessions to enhance fireground efforts. Another CDC/NIOSH report described a residential structure fire on July 21, 2007 in which a fire captain and fire engineer died in the line of duty in California (CDC/NIOSH, F2007-28). This fire occurred in a small 956 square foot

ranch-style residence, which had alterations made to the roof, creating a void space. Although there were significant delays in dispatching the proper number of fire units to this incident, it ultimately required the response of mutual aid crews. According to the report, once the mutual aid crews arrived, there was little coordination and communication between the departments that led to confusion in fire ground operations. Among the problems originally encountered, it was found that inadequate number of attack lines and improper use of positive pressure ventilation contributed to the conditions that killed the two firefighters. Again, one of the recommendations by CDC/NIOSH was that fire departments that operate together should also train together.

On March 5, 2008 a firefighter fatality resulted from a basement fire in Pennsylvania (CDC/NIOSH, F2008-08). The fire required the response from three mutual aid companies, and Incident Command had transferred from the first assistant fire chief on scene to another assistant fire chief ten minutes after arriving on scene. A total of four different Rapid Intervention Teams (RIT) were required to remove the victim, who was ultimately found not trapped or entangled. The following factors contributed to the firefighter's death: lack of standard operating guidelines (SOG's), lack of firefighter team continuity, suboptimal incident command and risk management, and lack of a backup hoseline. With multiple departments and companies responding, the report notes that differences in equipment and procedures need to be trained on prior to an emergency incident.

On October 6, 2010 an interview was held with Larry Bouts, current entrepreneur and former CEO and CFO (L. Bouts, personal communication, October 6, 2010). Mr. Bouts' corporate experience includes serving as Assistant Controller of PepsiCo, Inc., Chief Financial Officer for Pepsi Food Service Division, and Chief Financial Officer of Pepsi Foods

International. He was also President of Toys R Us International and Chairman and Chief Executive Officer for Six Flags Theme Parks. Prior to that, Mr. Bouts served in the United States Navy as a Lieutenant Supply Officer and Department Head aboard the USS Harlan County (LST 1196), a Landing Ship Tank that deployed Marines in combat. Mr. Bouts was contacted for two reasons: 1. To determine if there are similarities in the private sector that relate to this research project and, 2. What similarities exist in the military among different branches and what their success is based upon?

Starting with the corporate world, Mr. Bouts spoke of organizational challenges and cooperation. He stated that, like the fire service, many successful corporations such as, PepsiCo, Coke, IBM, Exxon, General Electric, and Walmart all have a strong culture. All new employees that begin work with the companies are presented with expected values and behaviors. Mr. Bouts also stated that anyone in the company, specifically in consumer marketing, that carried out their jobs in an honest way were not punished for making mistakes, as mistakes are sometimes made when being aggressive. This is a similar theory that was written in Sealy's Firehouse Magazine article regarding multi-company training – that mistakes are corrected, not punished or ridiculed. (Sealy, Apr 2003). Where Mr. Bouts ties his thoughts into the subject of this research project is a situation that he was involved in while working for PepsiCo, Inc. The divisions of the company included Sales, Marketing, and Finance; there was a need to improve performance among the individual divisions, which ultimately affected budgets, new product launches, and the overall performance of the company. The result was the appointment of an independent group that analyzed sales, marketing, and manufacturing AND post audits of the results. Mr. Bouts explained that this group was not very popular among the affected departments within the company; however, this approach became a model for the rest of the

company.

In a more similar comparison that relates to the fire service, Mr. Bouts reports that the military branches are bred for successful mission completion because failure costs lives. As an officer in the United States Navy, Mr. Bouts' responsibility and mission was to act in unison with the United States Marine Corps. The Navy supplied a squadron of ships that carried tanks, artillery, helicopters, ammunition, and fuel among other supplies for the Marines. Although they wore different uniforms, they worked in harmony when conflict arose due to frequent training. Mr. Bouts stated, "Each individual knew his job, from the lowest rifleman to the ship's captains. Orders were immediately followed, and action could be taken nearly immediately."

Mr. Bouts summarized the corporate and military examples by comparing the elements to that of the fire service: declare and explain the importance of the mission and ensure mutual respect among all levels. Repeatedly discuss the mission in the normal course of training and ensure that new recruits know and understand the core values; the pay off will show over time as older members retire. Additionally, train with other units when possible to ensure camaraderie grows between departments, and communicate to local politicians what is being done to improve performance and how well it is working.

A review of the Insurance Services Office's (ISO) program that provides information on communities' abilities to provide fire protection services found that credit is given for departments that meet specific criteria for automatic-aid agreements as well as conducting training with the departments involved in the agreements (ISO, PPC). The State of Ohio requires continuing education for all firefighters to recertify at the Firefighter II level every three years (OAC, 4765-20-19). This code identifies specific rules for individual firefighters to maintain

their certifications. The correlation between ISO and OAC requirements shows that fire departments that meet these standards will provide their communities with the added benefits of lower insurance premiums and improved training by incorporating training with outside departments.

To determine what departments around the country utilize for Standard Operating Guidelines regarding the use of mutual aid, a search of the Internet found numerous beneficial points of interest for forming SOG's that would improve the response for the fire departments participating in this project. The results were also used to help answer Research Question #3 and can be used as a starting point to develop procedures and guidelines as well as provide a basis for the initial training among the participating departments.

The fire departments in the western end of Lake County have many of the pieces available to form a successful response to emergencies where multiple agencies are involved; this includes readily available personnel, equipment, and communications that are all within a relatively small response area. However, the inconsistent use and identification of when and how assistance from outside communities is used can increase response time and delay critical fire ground and emergency procedures, potentially resulting in the loss of property and more importantly, the lives of civilians and firefighters. A more coordinated approach to training command officers in the use and deployment of firefighters from across jurisdictional boundaries, as well as forming solid work relationships between firefighters *before* emergencies happen, will create a more consistent response from the fire departments participating in this project, all of which ultimately benefits the citizens that the fire departments are sworn to protect.

PROCEDURES

On March 25, 2010 a meeting was held with the fire chiefs from the cities of Eastlake, Kirtland, Willoughby, and Willowick to propose the idea of organizing training among the departments on the western end of Lake County. The fire chiefs from Mentor, Mentor-on-the-Lake, and Wickliffe were unable to attend the first meeting, however, expressed interest in the project and subsequently agreed to become a part of it. This meeting was held to both obtain permission to research the possibility of the project itself as well as seek input from these chiefs on the overall idea and organization of the project.

A second focus group was held with the fire chiefs from Eastlake, Kirtland, Wickliffe, Willoughby, and Wickliffe on September 29, 2010. Also in attendance at this meeting were Mentor Fire Chief Richard Harvey and Deputy Chief Thomas Talcott, Mentor-on-the-Lake Fire Chief Robert Mahoney, and Wickliffe Fire Chief James Powers; all chiefs in attendance were given a copy of the latest draft and the current progression of the applied research project.

A review of the consultant report produced by ESCI for the Morton Grove and Niles Fire Departments contains recommendations on implementing a joint training program for the two departments. The report focuses on the specifics of the importance of training in the individual departments as well as the potential benefits of joint training, which ultimately improves emergency response for the communities.

Reviewed the Insurance Services Office's Public Protection Classification program for criteria that fire departments were graded; specifically looking for information on training that would improve the overall score given by ISO during a given fire department's review.

A survey was conducted among the departments participating in this project. Officers holding the ranks of Fire Chief, Assistant Chief, Deputy Chief, Battalion Chief, Captain, and Lieutenant were sent an electronic link to an online survey, which was anonymous in nature, in which the results were automatically recorded. A total of 65 surveys were sent and 42, or 64.6%, were completed.

Research Questions 1 and 2 will be answered by conducting a survey of the administrative, command, and company officers in the fire departments participating in this applied research project, along with referencing other departments' training and operations divisions. Research Question 3 will be answered by referencing the SOG's of departments researched in this project and an online search of fire department standard operating guidelines pertaining to MABAS and AMA use.

Limitations of the Study

It was determined that although many departments face similar situations as those presented to the departments in the western half of Lake County, many departments throughout the state of Ohio and within the United States have gone a step further and have organized county-wide departments. Finding specific areas of the state and country that have been successful in the coordination of multi-agency training and operations, while maintaining individual department identity was much more difficult than this researcher expected. Considering that two consulting groups were contacted and each could only produce one fire chief each for contact information showed that either this type of cooperation among

departments is rare or possibly not as officially documented as such.

The departments involved in this study create a limitation with the inconsistent use and lack of a defined Standard Operating Guideline among the departments regarding the use of MABAS and AMA. The survey that was sent to all of the fire officers in these communities yielded nearly a 65% return, however, this researcher was advised by some participants who completed the survey that certain company officers in their departments stated that they would not complete the survey and did not believe in the process and benefits of the project. This could be a normal response and reaction to change, or it could be due to a lack of education and realization that forms of regionalization are becoming the norm throughout the state and country. Ironically, all seven of the fire chiefs completed the survey and ultimately approved the project which shows that the leaders of these departments realize the importance of working with neighboring fire departments.

Definitions and Terms

Ordinary building construction. Exterior loads are carried by masonry, and interior loads are carried on wood, masonry, or unprotected steel (Brannigan, 1995).

Balloon-frame building construction. The studs run two or more stories high from the foundation to the eave line. At the floor line, a horizontal board called a ribbon board is nailed to the studs. The joists rest on the ribbon board. The channels between the studs may be open from the cellar to the attic, and the joist channels (space between the joists) are open to the stud channels (Brannigan, 1995).

Insurance Services Office, Public Protection Classification (PPC) Program. Used to help

establish appropriate fire service premiums for residential and commercial properties (ISO, PPC).

Blue Card Training. Program that teaches Incident Commanders and other fire officers how to standardize incident operations across their department. (Blue Card, IMS)

RESULTS

At the focus group meeting on March 25, 2010 Kirtland Fire Chief Anthony Hutton suggested that everyone involved review the Lake County Standard Operating Guidelines as a basis for developing training. This was the beginning of a common theme found during the research project that would influence any type of multi-department training; there must be an approved standard set of guidelines or procedures prior to any organized training among participating departments.

Some of the chiefs were previously enrolled in an incident management course (Blue Card Training), which was recommended for all chiefs in the county to obtain the certification. It is a goal to have all of the remaining command and company officers complete this training, however, it is an expensive program and would take considerable time and funds to complete.

The scope of this research project was questioned by one of the fire chiefs; should the focus of the project be on training multiple departments or should it be on standardizing individual fire company response, including tactics and initial operations that are set in motion by the initial-arriving incident commander? Or, should training be the main goal with incident command and individual company tasks addressed as components of standard operating guidelines?

Similar to the ESCI report, there must be consideration given to who would be ultimately responsible for the training and topics. The Morton Grove / Niles, Bark River, and Northeast Fire Collaborative have officers that meet on a predetermined schedule to design and schedule training for a given time frame. The topics are reviewed and approved by the fire chiefs as well as become subject for review on the quality and impact the training has on the departments' operations.

There were concerns regarding sending fire department units out of their defined response areas. This has both an operational and political concern that the fire chiefs brought forth. Consideration must be given to covering response areas while units complete training, as well as justification to politicians in the communities of the benefits of sending fire department units and personnel outside their jurisdictions to complete training that will improve the response when neighboring departments are utilized.

One major point of discussion surrounded the cost of beginning and maintaining a project such as this. Each fire chief stated that they support the project but it must have little to no impact on their budgets, meaning that the training must be limited to on-duty training. From a logistical standpoint, this would require some creativity to allow multi-company training while also maintaining adequate staffing levels for all cities involved. This is one of the most difficult situations to overcome due to the response to emergency calls. Depending on the municipality where a training session is taking place, it can be nearly impossible to complete any training without crews being called to some type of emergency. There will have to be a solution as to how to cover emergency calls if any priority is to be placed on the importance of completing necessary training. Currently, Mentor Fire Department Training Officer Lt. Rob Gandee has created a web-based internet training site that could prove beneficial in terms of allowing multiple fire companies to participate in training opportunities for classroom topics while remaining in quarters and not requiring a great deal of expense to incorporate the system into firehouses that have internet access. This would also allow all departments to learn the objectives, any preplanning information, or other “ground rules” of practical evolutions prior to attendance at a given drill site.

A survey was conducted among the departments participating in this project. Officers holding the ranks of Fire Chief, Assistant Chief, Deputy Chief, Battalion Chief, Captain, and Lieutenant were sent an electronic link to an online survey, which was anonymous in nature, in which the results were automatically recorded. A total of 65 surveys were sent and 42, or 64.6%, were completed. The results of the survey are as follows, and answer research questions 1 and 2:

Research Questions:

Research Question 1: *What can the participating departments do to prepare their firefighters for working with neighboring departments?*

83.3% (35 out of 42) of the responses stated that they do not routinely conduct training sessions with neighboring departments (Survey Question 1). *All* of those surveyed stated that they felt that their department and/or shift would benefit from training regularly with neighboring fire departments (Survey Question 9).

In the Morton Grove and Niles agreement, the two departments meet six times a year for fire training and nine times annually for EMS training. They perform training with the nine departments in the MABAS group twice a year (F. Rodgers, personal communication, June 19, 2010).

The Northeast Fire Collaborative has a training work group that meets every other week to discuss and develop lesson plans for the training program. The joint training exercises are held monthly; these training sessions are done consistently throughout the collaborative (J. Blum, personal communication, June 28, 2010).

The Bark River agreement provides monthly training on fire and EMS topics; the sessions that are held are on individual departments' scheduled training dates and are conducted the same regardless of what department the training is held. In addition, any department member that may not be able to attend their department's training is permitted to attend any of the other department's training. Also, there are three main instructors from the training group that teach the drills regardless of what department the session is held in. These instructors were chosen not only for their credentials, but for their demeanor and ability to teach and mentor without being intimidating (D. Brahm, personal communication, July 30, 2010).

Research Question 2: *How familiar are fire department members with neighboring departments' equipment and response capabilities?*

Survey Question 5 asked: How familiar are you with your neighboring departments' response area, including life hazard, building construction, and hazard class? Only two respondents stated that they were very familiar and the majority answered that they were only somewhat familiar with the response area served by neighboring departments. Survey Question 6 asked officers about particular equipment including hose loads, SCBA, and RIT equipment and again, the majority answer was "somewhat familiar" with what the equipment capabilities were in neighboring departments.

The Northeast Fire Collaborative pursued training all 120 officers in Blue Card Incident Management in the spring of 2010. They also provided training for all 400 personnel in the collaborative in October 2010; this was a project that was expected to take 18 months to

complete, however, provided a consistent approach in educating every member in multiple cities on the same topics (J. Blum, personal communications, July 29, 2010).

The Bark River agreement has gone a step further by placing equipment in fire and EMS units in identical places on their fire and EMS apparatus to ensure that any department member can find necessary equipment rapidly during emergencies. Many of the fire departments in the Bark River agreement are volunteer and can expect to see members from other communities on a regular basis (D.Brahm, personal communications, July 30, 2010).

Research Question 3: *What Standard Operating Guidelines should be adopted and subsequently used as a basis for a training guideline?*

The Northeast Fire Collaborative operates under a single SOG for emergency operations that covers Structure Fires, Tactical Priorities, Rapid Intervention Team use, Mayday procedures, Command Practices, Incident Management Team response and duties, and personnel staffing at fire scenes (J. Blum, personal communication, July 6, 2010).

The Bark River Emergency Services agreement identifies a need for a Standard Operating Guideline that provides for communities' ability to interchange personnel and units to each department's area (D. Brahm, personal communication, July 29, 2010).

An online search of mutual aid Standard Operating Guidelines revealed the following: The Washtenaw Area Mutual Aid Association in Michigan has created a guideline on Automatic Mutual Aid that defines specific staffing on apparatus of 3-5 firefighters along with one officer

or senior firefighter on each response. Operational Guidelines define structure fire responses as single or multi-family dwellings, commercial and industrial buildings, mercantile occupancies, institutional buildings, barns, garages, and large outbuildings. Any response to a reported fire in these structures requires a response according to the mutual aid policy, and if the response is not initiated by dispatch, the department of jurisdiction or aiding department shall inform dispatch that automatic mutual aid is required. Implementation of this guideline includes the requirement that the dispatch center personnel must be trained and that participating departments will hold joint training (WAMAA, SOG).

Ashley River, South Carolina has a Standard Operating Guideline that defines radio communications procedures. The main points of this SOG require members speaking on the radio to be specific, task-oriented, indicate objectives, exercise clear tone and rate of speaking as well as timing and spacing of messages, and instructions to not interrupt any conversation unless a member has emergency traffic. Furthermore, the SOG states that when working with automatic or mutual aid, that it is critical to the safety of the firefighters that all units working on an incident scene utilize the same operations frequency; it is the responsibility of the senior member of the unit that all members responding are on the correct operating channel when responding to another jurisdiction. When units from outside respond to Ashley River, the incident commander is responsible for designating a common channel for all responding agencies to operate on (ARFD, SOG).

Harpwell Neck, Maine Fire and Rescue's guideline is specific to company operations. As outlined in their *Engine Company Ops S.O.G.*, the purpose is defined, "To reduce the amount and detail of orders required getting personnel into action on the fire ground." This particular SOG defines each riding position on the apparatus and the responsibility and required equipment

for each person. The SOG defines the order that each apparatus arrive on fire scenes and the roles and support functions that each company provides to accomplish necessary fire ground tasks (HNFR, SOG).

The State of Illinois is divided into MABAS divisions. In 1998, Division 24 agreed on a Standard Operating Guideline in the division that provided for one committee member to respond to any box alarm for two-week rotations to assist the incident commander. Specifically, the committee member responds only to assist the incident commander. Committee members meet monthly to discuss the past months box alarms and future needs of the division. Semi annually, box changes are reviewed by the committee and sent to all departments (MABAS 24, SOG).

The research questions were answered by administrative and line officers with varying levels of rank and years of experience. All seven of the fire chiefs involved in the research project answered the survey questions; 4 Assistant / Deputy Chiefs, 13 Battalion Chief / Captain level officers, and 18 Lieutenants also provided responses (Survey Question 11). When asked to provide the length of time in the fire service, the responses showed a very experienced group with 13 officers having over 30 years of experience, 14 officers serving 21-30 years, 13 officers with 11-20 years of experience, and only 2 officers completing less than 10 years in the fire service (Survey Question 10).

DISCUSSION

The fire departments that participated in this study provide services to a relatively small response area. Minimal response times allow for rapid implementation of tactics at emergency scenes. Starting with the three NIOSH LODD reports (CDC/NIOSH, F2004-02, F2007-28, and F2008-08), it would be easy to compare the response area to any one of the locations described in the reports; it would also be easy to draw a parallel to the response of combination departments similar to the situations described.

In the studies completed by ESCI (ESCI report, 2006) and McGrath (T. McGrath, personal communication, July 28, 2010) recommendations are given on methods to improve the training provided by the departments involved in the change process in order to improve the delivery of training presented to multiple departments that ultimately improve the response to emergencies. Similar to the observations in the ESCI report, the departments in western Lake County place a great deal of emphasis on training and meeting State of Ohio standards. There would be an increase in quality of training and efficiency if the training divisions for each department were to collaborate on topics and drills that would benefit the entire area.

Mentor-on-the-Lake Fire Chief Robert Mahoney suggested that the topic of this research project could easily have been concentrated on standardizing company operations and assignments when responding to incidents. He stated that procedures should be developed for company and command officers on what to do in the first ten minutes of an incident, where conditions change rapidly and the potential for injuries is the highest. Chief Mahoney stated that this situation is critical mainly because chief officers would likely not be there during this time during an incident, especially if the incident occurs during non-business hours when most chiefs are not in quarters.

The interview with Larry Bouts (L. Bouts, personal communication, October 6, 2010) sheds light on both the corporate and military worlds and the opportunities present for working with different agencies. Mr. Bouts explains that making changes isn't always popular at first, but positive results will increase the confidence in the change. The military puts emphasis on knowing and achieving goals and that failure is not acceptable in combat. The only way to accomplish these goals is for everyone to know and learn their job, the mission, vision, and core values during training; this is a very solid launching pad to begin a training program that not only benefits a number of fire departments, but ultimately the service that is delivered to the citizens served in the participating communities. He eloquently states that in the military failure is not an option, because failure costs lives.

Bark River Emergency Services is a group that points out many shortcomings of the departments in the western end of Lake County. The Bark River area is comprised of numerous volunteer and paid-on-call departments serving a large rural area that have found a way to standardize their equipment, locations of equipment storage, and even sharing personnel in emergencies. As evidenced in the survey distributed, the majority of officers in western Lake County are relatively unfamiliar with the building construction, equipment, and capabilities of departments in fire stations that are just a few short miles away.

The Northeast Fire Collaborative has placed emphasis on individual departments maintaining their identity, but successfully combining resources for the greater good of the firefighters and citizens in their respective communities. This should be a model group for the participating departments in this project to follow; each department still "belongs" to their community but is able to follow a coordinated and agreed upon set of rules that allows outside fire departments to assist in a time of need. In a media release on June 18, 2009, Chief Otto

Huber explains, “The communities involved place a high priority on the safety service we provide to our residents. Through these efforts we will bring to bear the full response capabilities of eleven fire stations and over 300 professionals on a daily basis. Our residents will experience an enhanced response to their calls for assistance all the while knowing their fire departments are spending their tax dollars wisely.” This is a positive statement that each fire chief in the western end of Lake County should be able to be able make to their respective mayors and city councils.

While reviewing ISO’s Public Protection Classification Program (ISO, AA), credit is given for responding automatic-aid companies determined by the some of the following criteria:

- Interdepartmental training. The communities should conduct the following interdepartmental training:
 - o Quarterly half-day, multiple company drills with automatic-aid companies.
 - o Semiannual half-day, multiple company drills with automatic-aid companies.
 - o Annual half-day, multiple company drills with automatic-aid companies.

In essence, the departments participating in this project could provide an additional benefit to their respective communities by receiving credit for training that ultimately could help lower the insurance cost to residents and businesses by improving the rating determined by ISO.

It seems clear to this researcher that if every department participating in this project follows the state law (OAC, 4765-20-19), there must be a duplication of efforts among *individual* department training programs, whereas, some of this training should be dedicated to operations that affect the surrounding fire departments to improve the response to emergencies when multiple agencies respond together.

RECOMMENDATIONS

1. Define and agree on Standard Operating Guidelines. This is a lofty goal, but one that must be accomplished to provide a set of rules that all departments will follow, as well as provide the basis for any training. Fire company response and assignment should be based on the order of arrival. Due to the small area served by these communities, it is common for departments from outside jurisdictional boundaries to arrive before the remainder of some of the host city's own resources. If assignments can be organized into the most basic and common fire ground tasks such as fire attack, water supply, search and rescue, ventilation, and utility control, the burden on the incident commander is decreased because regardless of the name on the fire apparatus, necessary fire ground requirements will be met in rapid succession. The response of additional chief or command officers will also help to decentralize the fire ground and reduce the span of control for each officer. These routine fire ground tasks would also be topics for training and the coordination of each should be practiced for use on emergencies. Considering that all seven fire chiefs support this research project, a committee of chief, command, company, and training officers should be established and agree upon which SOG's should be developed and adopted. Everyone must be on the same page and this must be communicated and enforced without question. Getting all seven fire departments on the same page and following the same rules is the only way that they will be used consistently.

2. Agree upon minimum response requirements when requesting Mutual Aid and Automatic Mutual Aid. Each community's requirement for outside department response will differ, but the overall goal should be to ensure that sufficient personnel and equipment respond to an emergency. Referencing NFPA 1710, the *Standard for the Organization and Deployment of*

Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments would be a helpful resource to assist in determining the specific requirements for each community. Each department will have to assess their minimum daily staffing and adjust the automatic and mutual aid response to appropriate levels to satisfy the initial requirements of the fire ground and incident command structure. This information should then be translated to follow the agreed-upon standard operating guidelines and implemented by the respective departments' chief officers.

3. Provide for a means to allow companies to attend training sessions and the subsequent coverage of emergency calls when an area is left uncovered or short-staffed by the assigned department. This will allow for departments to leave their primary response area and learn about equipment and hazards in a neighboring community, while still providing a contingency plan for emergency service response for each respective community. At a very minimum, departments may leave a small crew intact in their respective stations so that all or part of the daily personnel assignment may attend training sessions outside city boundaries. Notification should be made to neighboring departments of the staffing change and request an automatic response from those communities when emergencies are dispatched. At the most, selectively take crews out of service to complete training evolutions and make arrangements with surrounding departments to provide coverage during the training times. It should be stressed in either situation that any significant emergency event or sudden increase in routine emergency calls that crews be dismissed and sent back to their respective response areas. Consideration must be given to coordinating these training sessions so that large response areas are left uncovered. This can be also be accomplished by alternating or centrally locating training sessions so that each

community shares in the responsibility to cover other cities' response areas while training is in progress.

4. Develop a post incident analysis (PIA) procedure to determine the effectiveness of the response to each incident requiring multiple department response. It would be beneficial to utilize the webcast program developed by Lt. Gandee to formally present the PIA for all participating departments and answer the following questions: 1. Were the agreed-upon multi-department operations and training procedures used, and were they beneficial or detrimental to the incident? 2. What new topics or shortcomings were identified from the incident itself that can be used for future training topics to continually improve operations? Accountability for decision-making should be informative and educational and not punitive, with stress placed on achieving the ultimate goal - which is improving the safety, efficiency, and effectiveness of every response.

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APPENDIX 1 – MABAS BOX SAMPLES

Figure 1

DEPARTMENT EASTLAKE FIRE DEPT.

STAGING AREA AS PER INCIDENT COMMANDER

EFFECTIVE DATE: 02/01/06 TYPE: Low Hazard
 OCCUPANCY/HAZARD

B O X	1711
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ALARM	CITY	ASSIGNMENT	REMARKS
1ST	Willoughby Willowick Wickliffe Willoughby Hills Mentor	Truck Engine Engine Medic Air 1	Auto-Aid Auto-Aid Level II Staging
2ND	Mentor Euclid Mentor-on-the-Lake Kirtland	Truck Engine Engine Medic	(216) 731-1212
3RD	Painesville City Mayfield Village Concord Highland Heights	Truck Engine Engine Medic	(440) 461-1206 (440) 442-1011
4TH	Painesville Township Fairport Harbor Perry Grand River	Truck Engine Engine Medic	
5TH	Richmond Heights Mayfield Heights Chesterland Chardon	Truck Engine Engine Medic	(216) 486-1212 (440) 442-1212 (440) 286-1234 (440) 286-1234

Figure 2

KIRTLAND FIRE DEPARTMENT	B O 1911 X
Staging Area: Determined by Incident Commander	TYPE: LOW HAZARD
Effective: September 15, 2006	800Mhz Channel: Kirtland/Willoughby Hills

ALARM	AGENCY	ASSIGNMENT	REMARKS
1ST	*Willoughby Hills *Willoughby *Mentor Chardon Lake County Eastlake Mentor-on-the-Lake	Engine Engine Truck Medic Air Truck Engine to Station 2 Medic to Station 2	Auto-Response Auto-Response Auto-Response (440)286-1234 or 286-7187 (Rt. 306 @ Billings) (Rt. 306 @ Billings) *Reported working fires
2ND	Willowick Concord Wickliffe Lake County Chester	Truck Engine Engine Command Van Medic	(440)286-1234 or 286-7187
3RD	Painesville City Mayfield Village Munson Mentor	Truck Engine Engine Medic	(440)461-1206 (440)286-1234 or 286-7187
4TH	Willoughby Leroy Painesville Twp. Hambden	Truck Engine Engine Medic	(440)286-1234 or 286-7187
5TH	Eastlake Fairport Harbor Perry Russell	Truck Engine Engine Medic	(440)286-1234 or 286-7187

Figure 3

ALARM	CITY	ASSIGNMENT	REMARKS
DEPARTMENT: WILLOUGHBY STAGING AREA: TO BE DETERMINED BY INCIDENT COMMANDER EFFECTIVE DATE: September 1, 2006 TYPE: MEDIUM HAZARD			B O 1412 X
1ST	MENTOR < EASTLAKE < WILLOUGHBY HILLS KIRTLAND LAKE COUNTY ----- WICKLIFFE MENTOR ON THE LAKE	ENGINE < TRUCK < ENGINE MEDIC AIR 1 ----- MEDIC TO STA #2 ENGINE TO STA #2	AUTO RESPONSE < Key Factors: 1) Reported working fire 2) Smoke or flames showing 3) Persons trapped 4) Multiple calls 5) Additional factors
2ND	WILLOWICK MAYFIELD VILLAGE CONCORD MENTOR HIGHLAND HTS	ENGINE ENGINE 461-1206 ENGINE TRUCK MEDIC 442-1011	LEVEL II STAGING REQUIRED FOR ALL ALARMS. EMERGENCY MANAGEMENT COMMAND VAN, RED CROSS, OR SALVATION ARMY CANTEEN AT REQUEST OF INCIDENT COMMANDER.
3RD	FAIRPORT HARBOR PAINESVILLE TWP RICHMOND HTS EUCLID LYNDHURST	ENGINE ENGINE ENGINE (216) 486-1212 TRUCK (216) 731-1212 MEDIC 449-1212	LAKE COUNTY AIR 2 AT REQUEST OF INCIDENT COMMANDER.
4TH	PERRY GRAND RIVER LEROY PAINESVILLE CITY EASTLAKE	ENGINE ENGINE ENGINE TRUCK MEDIC	
5TH	MADISON BEACHWOOD CHESTER MAYFIELD HTS CHARDON	ENGINE ENGINE (216) 464-1212 ENGINE (440) 286-1234 TRUCK 442-1212 (440) 286-1234 or 286-7187	

Figure 4

MABAS ALARMS			
Willowick Fire Dept.			1613
Staging Area: Determined by Incident Command Effective Date: January 10, 2010			High Hazard
			800 Mhz Channel: Wickliffe/Willowick
ALARM	DEPARTMENTS	ASSIGNMENT	REMARKS
1st	Eastlake Wickliffe Kirtland Euclid Mentor Willoughby Hills Willoughby	Truck Engine Engine Engine Engine and Air 1 Medic Truck	Auto-Aid Auto-Aid 216-731-1212
	Highland Heights Richmond Hts.	Medic Engine	To Station 440-441-1011 To Station 440-486-1212
2nd	Grand River Fairport Harbor Mentor-on-the-Lake Painesville Twp. Mayfield Hts. Mentor Mayfield Village EMA	Medic Engine Engine Engine Engine Truck Truck Command Van	 440-442-1212 440-461-1206
	Mentor Willoughby Hills Concord Twp. Madison Fire Dist. Willoughby Lyndhurst Euclid	Medic Engine Engine Engine Engine Truck Truck	 440-449-1212 216-731-1212
4th	Wickliffe Mayfield Village Chesterland Perry Fire Dist. Leroy Twp. Painesville City South Euclid	Medic Engine Engine Engine Engine Truck Truck	 440-442-1212 440-286-1234 440-381-1212
	Pepper Pike Cleveland Hts. Madison Fire Dist. Eastlake Russell Twp. Munson Twp. Chardon	Medic Engine Engine Engine Engine Truck Truck	216-831-8833 216-321-1234 440-286-1234 440-286-1234 440-286-1234
CONSIDER ACTIVATION OF STATE ERP VIA MENTOR DISPATCH OR LAKE CENTRAL			

APPENDIX 2 – SURVEY QUESTIONS AND RESULTS

This survey was distributed to the fire departments in the cities of Eastlake, Kirtland, Mentor, Mentor-on-the-Lake, Wickliffe, Willoughby, and Willowick. The survey was designed to be answered by officers with the following ranks: Fire Chief, Assistant Chief, Deputy Chief, Battalion Chief, Captain, and Lieutenant. A total of seventy-five surveys were distributed.

Surveys were distributed via email with a link to an online survey; the online survey collected the data and reported the results.

1. Does your fire department routinely conduct training sessions with neighboring fire departments?

16.7% (7) Yes

83.3% (35) No

2. Do you feel confident in your neighboring departments' abilities in terms of fireground operations?

71.4% (30) Yes

28.6% (12) No

3. Incidents are managed in a similar and standard manner regardless of the city and Incident Commander.

7.1% (3) Strongly Agree

57.1% (24) Agree

35.7% (15) Disagree

0% Strongly Disagree

4. The fire departments that surround yours use the same fireground terminology and radio communication procedures.

14.3% (6) Strongly Agree	73.8% (31) Agree
9.5% (4) Disagree	2.4% (1) Strongly Disagree

5. How familiar are you with your neighboring departments' response area, including life hazard, building construction, and hazard class?

4.8% (2) Very Familiar	31.0% (13) Familiar
52.4% (22) Somewhat Familiar	11.9% (5) Not at all Familiar

6. How familiar are you with the equipment your neighboring departments carry, including hose loads, SCBA, rescue tools, and RIT equipment?

4.8% (2) Very Familiar	21.4% (9) Familiar
54.8% (23) Somewhat Familiar	19.0% (8) Not at all Familiar

7. Have you ever been involved in an incident that would be considered a "Close Call" or "Near Miss"?

54.8% (23) Yes	45.2% (19) No
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8. Developing an updated Standard Operating Guideline for the departments in your area would improve safety during fireground operations.

50.0% (21) Strongly Agree	47.6% (20) Agree
2.4% (1) Disagree	0% Strongly Disagree

9. Your department and / or shift would benefit from training regularly with neighboring fire departments.

47.6% (20) Strongly Agree	52.4% (22) Agree
0% Disagree	0% Strongly Disagree

10. How many years have you been in the fire service?

4.8% (2) 1-10 Years	31.0% 11-20 Years
33.3% (14) 21-30 Years	31.0% (13) Over 30 Years

11. What is your current rank?

16.7% (7) Chief	9.5% (4) Deputy / Asst. Chief
31.0% (13) Batt. Chief / Captain	42.9% (18) Lieutenant