

Evaluating the Training Program for Green Township
Department of Fire and EMS

By: Robert P. Wohlfrom
Lieutenant
Green Township Department of Fire and EMS
6303 Harrison Ave. Cincinnati, Ohio 45247

A proposed research project submitted to the Ohio Fire Executive Program

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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.

Signed: _____

Printed Name: _____

ABSTRACT

The Green Township Department of Fire and Emergency Medical Service is committed to providing a quality training program. The Chief has made it clear that the second highest priority to making emergency details is training. The problem this paper addresses is the need to reorganize and eliminate inconsistencies in the training program. The seven officers, who currently have a part in administering the program, work on training material in-between their day-to-day responsibilities as company officers and fire department administrative staff.

The purpose of this study is to identify and describe training program models and delivery options for Green Township Fire and EMS. The study was accomplished by using evaluative research in order to make the recommendations to the administration.

Several research questions were addressed about training programs, and what improvement measures could be applied to Green Township. Answering these questions involved an extensive literature review as well as two surveys. One was administered within the fire department to its own employees to evaluate the current program. The other was a telephone survey of departments across the State of Ohio to evaluate the structure and efficiency of their programs.

The results of the study identified that a department the size of GTF&EMS should have a full-time training officer. Even with a training officer in place, 100 percent of the Ohio fire departments surveyed still utilize a company officer or subject matter expert to conduct drills. The recommendations of the study were to promote a current lieutenant to the rank of District Chief of Training. This position would require a 40 hour work week, holding the officer accountable for the proficiency of the department's training.

TABLE OF CONTENTS

CERTIFICATION STATEMENT 2

ABSTRACT..... 2

TABLE OF CONTENTS..... 3

INTRODUCTION 4

 Statement of the Problem..... 4

 Purpose of the Study 5

 Research Questions..... 6

BACKGROUND AND SIGNIFICANCE..... 6

LITERATURE REVIEW 9

PROCEDURES..... 20

 Definition of Terms..... 21

 Limitations of the Study..... 23

RESULTS 24

DISCUSSION..... 25

RECOMMENDATIONS 29

REFERENCES 32

APPENDIX I - Insurance Service Office Limited’s list of training considerations 35

APPENDIX II - GTF&EMS training evaluation results from 2015 ISO rating.....36

APPENDIX III - In House Survey..... 37

APPENDIX IV - Phone Survey.....43

INTRODUCTION

Statement of the Problem

When people are in need of help they call the fire department. That need could be anything from a child's head being stuck in a railing to a cardiac arrest, a burning building, or even a natural disaster. These are just a few of the job responsibilities for which the modern firefighter must be proficient. All of these different job skills require initial training followed by continued education to stay proficient in the tasks. Green Township is no exception. Members of The Green Township Department of Fire & EMS (GTF&EMS) must maintain skills in the areas of modern firefighting techniques, emergency medical training, rescue, hazardous materials, arson investigation, driving and pump operations, and others. In addition, the officers must be educated in the areas of human relations and personnel issues.

Training in Green Township is currently administered by seven different people. The fire chief assigns five online training courses to be completed in a two month cycle. The district chief of EMS creates and schedules two weekly EMS drills each month. One district chief is in charge of fire training which consists of controlling the training budget for outside training and college tuition reimbursement. He is also responsible for overseeing three shift lieutenants who schedule the two monthly fire trainings. Another district chief is tasked with record-keeping for outside education. One of the three lieutenants is also the representative in a joint training group made up of seven area fire departments as well as the department's yearly live fire training.

All of the officers are instructors of fire or EMS topics, as are several of the firefighters. The three lieutenants organizing the fire training schedule are each responsible for one third of the yearly schedule. Their material comes from archived drills or new material produced by any

of the instructors. There is no training matrix in place to evaluate the effectiveness of these lessons.

The current practices contribute to inconsistency in the department's training program. This creates confusion for students and has become a safety concern on the fire ground because of unpredictable activity. One example of this is a fire involving the use of a newly implemented hose load. Because the firefighter was unfamiliar with the proper hose deployment, there was a significant delay in getting water to the crew. As a result, the adjacent room flashed and forced nearby crews out of the structure. After the incident, it was clearly acknowledged that the firefighter in question did not receive the appropriate instruction from previous training sessions.

As with any para-military organization, the best way to become proficient in the fire service is to continually train. This is best accomplished through a consistent training model.

The problem this study will address is the inconsistent delivery of training to the GTF&EMS workforce. This project will investigate a diverse range of training in other fire agencies to identify possible alternatives for Green Township.

Purpose of the Study

The purpose of this study is to identify and describe training program models and delivery options for the Green Township Fire & EMS Chief using evaluative research to assist in determining the most effective form of training available for future fire department operations.

Research Questions

The research questions this study will investigate are:

1. What are the current training requirements or recommendations that are applicable to Green Township Department of Fire and EMS?
2. What type of training programs and evaluation matrices do other Fire/EMS agencies utilize?
3. What training delivery options would improve the training program in Green Township?

BACKGROUND AND SIGNIFICANCE

The Green Township Fire Department formed out of a privately owned volunteer company/organization in 1983 known as Mack Volunteer Fire Department Incorporated. That year the governing body, which is still in existence today as a board of three township trustees, chose to make the fire department a local government entity instead of contracting services from Mack Fire, Inc. At that time, the newly formed fire department utilized the system in place from Mack Fire, Inc., which included seven full-time personnel during daytime hours and volunteers for the nights. It was not until 1985 that the department became a 24 hour operation, going from a part volunteer department to an all paid department with full- and part-time employees.

In 2005, under the department's second full-time chief, the name was changed to the Green Township Department of Fire and EMS (GTF&EMS). It currently operates out of four

fire stations and employs 92 people. The workforce is made up of 44 full-time and 48 part-time employees. The full-time shift is on a 24/48 hour rotation, and the part-time shift is on a 12 hour shift every six days. The department operates with a shift lieutenant at each fire station, one district chief/shift commander, one district chief of EMS, a fire marshal, an assistant chief, and the fire chief. The chief answers to the township administrator who reports directly to the three elected township trustees. The chain of command within the Department of Fire and EMS starts with the chief and descends to the assistant chief, district chief, lieutenant, full-time firefighters, and part-time firefighters.

Green Township covers an area of 28.5 square miles and has approximately 58,370 residents, making it the second largest township in Ohio. It also has the third largest high school in the State of Ohio. In 2014, Green Township Department of Fire and Emergency Medical Services (GTF&EMS) responded to 1,758 fire details and 5,499 emergency medical details. This is a total of 7,257 emergency details for the year and an average of 19.89 emergency details per day. This number of 7,257 represents a single year increase of 645 details over 2013 (9.8 percent) and a record-setting year (*2014 Green Township Annual Report*). The department's annual operating budget as of 2014 is approximately 7.6 million dollars.

As mentioned in the introduction, the training in this department is currently being organized by seven different people. One of the problems this yields is a lack of organization and consistency. The five online training courses issued by the Chief, through the Ohio Fire Academy's 24/7 program, rarely coincides with the weekly drills. This makes it difficult to reinforce the online topics during weekly drills.

All three shift lieutenants working at Station 54 are assigned the responsibility of assembling a lesson plan and scheduling the weekly training. Each one schedules drills on a

three month cycle. For example, Lieutenant A may schedule January's drills but will not schedule again until April. This prevents him from building upon his topics for another three months. Since the training is an assigned responsibility, regardless of the lieutenant's interest or passion, the workload may not be accomplished equally.

The company officer of each station is tasked with the delivery of the weekly drills, both with fire and EMS. When that officer is not working, a full-time firefighter steps up to work out-of-grade as a company officer. The downfall to this type of system is that twelve different messages may be disseminated, not by design, but because of different skill levels and interpretations. Like most modern fire departments, GTF&EMS is an "all hazards" department. It is versed in all areas of emergency mitigations. Some of the other services the department provides other than the primary fire suppression and emergency medical calls are as follows:

- Car seat inspection and installation
- Community CPR training
- Smoke detector and battery installation
- School fire safety talks
- Fire station visits
- Fire cause and determination
- Fire hydrant service
- Fire and life safety inspections
- Scouting and babysitter class requirements
- Neighborhood public relations events
- Medic bike team
- Fire department honor guard
- Citizens fire academy
- Citizens Emergency Response Team (CERT)
- Hazardous Materials response
- Technical rescue response

While all of these are important and need the time and attention of fire department personnel, the Chief identified training as a high priority, second only to making emergency details. If the fire

department provides a service to the public, the training officer must provide adequate training to the department members in that service (Pinsky, 2013, p. 93).

In justifying this study it is paramount to evaluate the past to improve the future. For example, an earlier fire ground safety concern involving an improper hose deployment resulted from improper training. Inconsistent training can only lead to undesirable results at emergency scenes. Author Bradley Pinsky agrees stating, “The existence of a substandard training program increases the likelihood of firefighter injuries and decreases the opportunities to perform skills properly, efficiently, and safely” (2013, p. 95). The information provided by this study will give the fire chief the background knowledge to make an informed decision on the most efficient operation of the GTF&EMS’s training program.

LITERATURE REVIEW

While there are currently no requirements for recertification at the *county* level, the *state* dictates certifications for firefighter and paramedic training in Ohio. Per the Ohio Revised Code (ORC) 4765-20-13 Firefighter Continuing Education, for renewal of a firefighter II certificate, “An applicant shall complete 54 hours of continuing education that is related to the fire service and approved by the applicant’s fire chief in a three-year cycle” (Chapter 4765-20). In the ORC, section 4765-20-16 Fire Safety Inspector Continuing Education, states that “an applicant shall complete 30 hours of continuing education for the certification cycle” (Chapter 4765-20). A fire instructor, per section 4765-21-04, “must have taught not less than 24 hours of instruction related to fire service training and obtained six hours of continuing education related to fire service

instruction” (Chapter 4765-21). A State of Ohio paramedic as per ORC 4765-17-02 must have a minimum of 86 continuing education hours within a three year certification cycle (Chapter 4765-17).

Not only does the state have these requirements, but similar requirements can be found at the national level. The two most influential agencies regulating national standards for the fire service are the Occupational Safety and Health Administration (OSHA) and the National Fire Protection Association (NFPA). OSHA primarily regulates industrial fire service agencies. According to Linda Richards, “the Occupational Safety and Health Act became law at the end of 1970. This act gave the federal government the power to enforce safety regulations to protect workers in industry” (para. 1). Richard Fairfax, director at the Office of General Industry Enforcement, clears up any confusion in his letter to Ms. Decracker of Sodus, New York on October 11, 2006 by stating the following:

“Please be advised that Federal OSHA neither has regulations, nor jurisdiction, over State, municipal, or volunteer fire departments. Section (3) (5) of the Occupational Safety and Health Act of 1970 specifically excludes Federal OSHA’s authority over employees of state and local government.”

NFPA has recommendations for fire service training reports and records. These recommendations are outlined in the 2012 edition of NFPA 1401:

“NFPA 1401 originated from the 1970 edition of NFPA 9, *Recommended Practice for Training Records and Reports*, which was tentatively adopted at the 1969 NFPA Annual Meeting. The tentative recommended practice with amendments was officially adopted at the 1970 NFPA Annual Meeting” (NFPA, 2012).

Fire chiefs and fire training officers alike can use this source as a template for their fire records system. It provides a step by step system for officers tasked with managing a fire department's training program.

NFPA 1401 discusses the importance of the use of training records in the formation of a sufficient training program. The training officers should use the training records and reports to evaluate the productivity of the training program, specifically ensuring the training program is producing adequate results regarding time, individual performance rating, staffing, and financing. The training records should also be used to identify, not only the deficiencies, but the successes of the training program.

Along with training records, NFPA 1401 emphasizes the importance of standardization in regard to a successful training program. For instance, the document makes it clear that every member of a fire department should undergo standardized instruction and training. This training should encompass significant planning and preparation. Schedules for standardized training should be compiled for the short-term, intermediate-term, as well as the long-term; this makes long-term planning easier for the training staff, instructional staff, company officers, and personnel.

NFPA 1401 also suggests that specificity is important for a successful training program. The station training schedule, compiled by the training officer, should signify particular topics that must be covered by the company/station officers. A balance should exist between classwork and hands-on training. Proficient training schedules should include all required topics to meet job knowledge requirements and maintain previously learned skills. Days set aside specifically for make-up sessions should be included in this schedule.

Along with a training schedule, NFPA 1401 suggests there should be an annual report of the training program. This report should list and explain the accomplishments made throughout the year, as well as restate the goals and future plans for the following year. Training records should be recorded to document department training. These records should help with determining the effectiveness of the program. The information in the training records should yield supporting data to justify any additional training or equipment needed. Examinations, performance tests, and personnel evaluations should contribute to the advancement of the program; however, the results of the evaluations must be analyzed, filed, and properly administered in-order to be beneficial. Training records should be kept up-to-date and provide the status and growth of all persons receiving training.

NFPA 1401 not only suggests keeping training records but evaluating the records as well. The document states that reviewing training records habitually will lead to a clear view of the training program's success. Evaluation of each training record should determine several factors, such as whether or not an individual has taken all the required training, whether any performance deficiencies appear, and what kind of program is being developed to overcome these deficiencies. The evaluation should also determine if the firefighters have met all the required job performance standards established by the department. Finally, the evaluation tool should ask if there are areas of training that have been overlooked completely and if the cycle of training is sufficient to maintain skill levels (NFPA 1401).

NFPA 1401 makes it clear that training is considered to have the utmost importance. Therefore, it is important to create a successful training program. One way to achieve a proficient training program is with the help of matrices. Jerry Knapp, author of "Five Steps to a Successful Annual Training Plan" in *Fire Engineering Magazine* suggests that "a matrix will

help you with everything from designing the overall operation to the details that will identify single-point failures that get people killed” (2014, p. 16). By using a matrix, a training program can lay out the overall plan and help identify critical details for success. A matrix is simply a chart designed by the training officer for the specific training needs of the department. A matrix also helps when compiling a training schedule (Knapp, 2014).

Firefighter training is essentially a form of adult learning. According to Scott Kraut, author of “Constructing and Implementing the Complete Training Program”, found in *Fire Engineering Magazine*, “when dealing with adult learning, one must tailor the techniques to what has been referred to as ‘andragogy’” (2014, p. 30). Malcolm Knowles, a professor at Boston University, first coined the word “andragogy” to explain the opposite end of the spectrum from traditional child education. Knowles explains the modern practice of adult education as a spectrum and non-dichotomous; students may be somewhere between traditional learners (pedagogy), and adult learners (andragogy). This creates the challenge of finding where on this scale the students fit.

Kraut sums up his viewpoint by saying, “A solid quality assurance program must be created to maintain the effectiveness of the instructors and content throughout” to reach the widely varied learning styles among adult learners (2014, p. 30).

According to Bradley Pinsky, in his article “Developing a Fire Service Training Program” in *Fire Engineering Magazine*, a substandard training program increases the likelihood of firefighter injuries and decreases the opportunities to perform skills efficiently and safely. Sub-par programs deny firefighters the proper skills and knowledge they need to perform their job adequately. The absence of a designated training officer creates inconsistent performance measures (2013, p. 93).

With these frequent deficiencies in firefighter training programs, a resolution is needed. Departments with a small workforce may consider combining training functions with other nearby departments. This solution allows for the administration of an encompassing support system for an effective training program. GTF&EMS created a similar venture. The department joined six other area departments to form the Western Hamilton County Training Committee, a sub-group of the Western Hamilton County Fire Chiefs Association. Jason Blount suggests in his article “New Training Officer: Life in the Fast Lane” in *Fire Engineering Magazine* that the training officer should get out and meet other training officers in his region (2009, p. 48). GTF&EMS accomplishes this by utilizing a lieutenant who serves as the liaison between Green Township and the Western Hamilton County Training Group. The relationships built with other training officers can reap huge benefits for all parties involved. This networking can help all the training officers involved in joint exercises, in sharing resources, in gaining a common understanding of regulations, and, most importantly, in making professional friends with whom one can work and build mutual support (2009, p. 48).

Although communication is an important part of developing a successful training program, organization is also a key factor. The training program should be written to follow an organizational statement (more specific than a mission statement) that covers the services provided by the department. It provides the training officers with clear instructions on the general services firefighters must perform. The training officer must ensure that personnel are capable of delivering these services in a safe and efficient manner. If the fire department provides a service to the public, the training officer must provide adequate training to the department members in that service (Pinsky, 2013, p. 93).

Along with proper organization, the training officer must be able to create an adequate lesson plan. Lesson planning skills are developed in fire instructor training courses. Training officers do not need to create their lesson plans from scratch; they should utilize other fire departments' lesson plans as a point of reference. Training officers who do not communicate with other departments tend to base their lessons on their own beliefs. The training division of an 'all-risk' department, such as GTF&EMS, has a broad range of subjects to deliver with a multitude of ways to do it. To productively utilize time and resources, the training officer needs to find a direction and proceed. However, the training must be relevant to the department's needs (Blount, 2009, p. 48). The training initiatives should be produced alongside the organization's strategies and objectives. Too often training programs are prepared and presented with material that is popular but not particularly important for reaching the department's goals (Palazzolo, 2009, p. 38).

Solely providing a training program is not sufficient in the prevention of accidents or increasing efficiency. The training officer is tasked with overseeing the program to ensure that the firefighters are properly participating. Since the training program is made to increase the proficiency of the fire department, the training officer is required to make sure all firefighters are able to perform the skills and have the knowledge regarding each skill. During drills, training officers should include evaluations to ensure competency. These evaluations should serve as tests based on the objectives stated in the lesson plan (Pinsky, 2013, p. 96).

From a business perspective, nothing contributes more to an organization's profits or losses than the employees. "Having the right employee in the right position at the right time, executing the right processes is a recipe for success" (Palazzolo, 2009, p. 38). Palazzolo goes on to state that this scenario is a rare occurrence; so many organizations rely heavily on the training

department for creating successful employees. The American Society of Training and Development's "Certified Professional in Learning and Performance" (CPLP) suggests taking an ardent stance on development, deliverance, and follow up for training. This stance should be adopted by all learning departments where organizational training needs are awaited and known, followed by proper delivery (2009, p. 38). This statement applies to the fire service as well.

Frequent training is essential for firefighters to conduct their duties safely. According to author Gary Lane, for many departments, training is near the bottom of the priority list ("To Train or Not", 2012, p. 77). All employees benefit from training, regardless of the type. According to the National Fire Protection Association (NFPA, 2012), legal matters are a concern for the fire service. "The maintenance of accurate and complete training records in accordance with this document is one way fire departments can limit their liability." (pp.1401-4010). For example, if a firefighter is maimed or killed while performing his or her duties, the National Institute of Occupational Safety and Health (NIOSH) will scrutinize the department's training program while gathering knowledge of the event. Therefore, it is of utmost importance that a department's training program can be verified with certainty. Having an appropriate training program can significantly minimize liability. NFPA 1401 suggests keeping detailed records of each departmental and individual training event in a protected file for the entirety of an individual's career, as well as evaluating and updating the training program at least once a year (2012, p. 10).

Proficient documentation is not the only quality that makes a successful training officer. Blount outlines in his article "Specific Characteristics of a Good Training Officer": commitment consistency, communications, contingency, credibility, credentials, contacts, conduct, customers, conflicts, and constitution. A good training officer must purposefully assume the duties of the

position. The training officer should also provide consistent requirements for the workplace. Facilitated communications between all department levels should be provided. All plans should be well thought out, including alternative plans. Training officers should also be well versed in the subject matter they are teaching; building up credentials is one way to accomplish this. Training officers should also forge relationships within their organization. Transparency, honesty, and stability are also important. Working for the firefighter's best interest should be the training officer's ultimate goal. Training officers must also become proficient in resolving conflicts. And lastly, training officers need to defend the behavior and administration of their department.

Regardless of the training officer's qualifications, it is the company officer who should actually train the department firefighters. This is a company officer requirement in Green Township. Training exercises should support learning in order for members to develop skills they can recall and utilize effectively. A representation of this learning method is the common phrase, "drill it into your head". If the company officer does not model training after this learning process, the training session is in danger of making members apathetic. According to Brian Kazmierzak and Forest Reeder, company officers should strive to make training something their firefighters anticipate, and it should be the main focus of every day ("The Company Officer: The Perfect Training Officer", July, 2009).

As Murphy suggests in his article "Training Officer Liabilities" (2009), quality training is an important division of every fire department. The significance is magnified when considering the goal and obvious dangers of being a firefighter. These dangers are quantifiable with an average of 100 fatalities and 83,000 injuries annually. Proper training is utilized to limit these deaths and injuries; however, inadequate training can lead to deaths and injuries as well.

Murphy asserts that improper training accounts for roughly 10 percent of firefighter deaths and more than 7,000 injuries. He continues, “The deaths occurred during a broad range of activities, including apparatus and equipment drills, physical fitness activities, live-fire training, underwater/dive training, and classes or seminars” (2009). To address the dangers of unsafe training environments, the NFPA published a set of training guidelines. For instance, NFPA 1403, *Standard on Live Fire Training Evolutions* (2007 edition), specifies how to conduct a safe live-burn evolution. Other NFPA standards that outline training guidelines include 1582, 1002, 1670 and 1006: firefighter health and safety, vehicle safety, and rescue safety, respectively. As aforementioned, the first responsibility of the training officer is to provide a safe training environment. It is important for the training officer, as well as the department’s chief officers, to investigate and take note of all training accidents. Incidents resulting in fatality or serious injury may also be explored by local, state and/or federal agencies. This documentation is frequently used in the legal process. The fire department itself is more likely to be held accountable than the individual training officer because the training officer is an employee of the fire department. This arrangement creates an incentive for fire departments to have more rules and supervision. If he violates these rules, the training officer can be held accountable in a civil lawsuit if he willfully and deliberately causes the incident that leads to serious injury or fatality. The best defense for these cases is to have proper documentation such as lesson plans, sign in sheets, and evaluations (NFPA 1401, *Recommended Practice for Fire Service Training Report and Records*, 2006 edition, p. 207).

To help establish appropriate fire insurance premiums for residential and commercial properties, insurance companies need reliable, up-to-date information about a community’s fire-protection services. The Insurance Service Office (ISO), provides that information through the

Public Protection Classification (PPC™) program (2014, “ISO’s Public Protection Classification (PPC™) Program”, para.1).

ISO collects information on municipal fire-protection efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data using their Fire Suppression Rating Schedule (FSRS). ISO then assigns a Public Protection Classification from 1 to 10. Class 1 represents superior fire protection, and Class 10 indicates that the department’s fire-suppression program does not meet ISO’s minimum criteria. As of January 2015, Green Township has an ISO rating of 3 (2014, “ISO’s Public Protection Classification (PPC™) Program”, para.2).

By classifying a community’s ability to suppress fires, ISO helps evaluate its public fire-protection services. The program provides a benchmark for nationwide standards that help fire departments in planning and budgeting for facilities, equipment, and training. By securing lower fire insurance premiums for communities with better public protection, the PPC program provides incentives and rewards for communities that choose to improve their firefighting services. (2014, “ISO’s Public Protection Classification (PPC™) Program”, para.3).

In many communities across the nation, (including Green Township) fire suppression is only a small part of a fire department's overall responsibility. ISO recognizes the vast duties of a modern fire department and understands the decisions a department must make in planning and delivering emergency services. One of the features evaluated is the department’s training program. Appendix I shows an itemized list of what ISO evaluates in a training program. Appendix II shows the ISO rating for the Green Township Department of Fire and EMS training

program in 2014. GTF&EMS earned 6.92 credits for training out of a possible 9 (2014, “ISO’s Scope of the PPC™ Evaluation”, para.2).

PROCEDURES

This applied research paper was formatted and written based on the sixth edition of the American Psychological Association publication manual. This research paper was also compiled by scanning the database of the Ohio Fire Chiefs Association-Ohio Fire Executive Applied Research Projects for correct formatting as well as utilizing the Ohio Fire Executive Program research manual. The author utilized the evaluative research method to identify and describe training program models and delivery options for the Green Township Fire & EMS Chief to assist in determining the most effective form of training available for future fire department operations.

The research began at the Hamilton County Public Library where an extensive search of the library’s data base revealed numerous articles on fire department training programs as well as corporate training programs. These articles were printed and studied for pertinent content. A copy of the National Fire Protection Association (NFPA 1401) was obtained from Green Township Department of Fire and EMS Chief, Doug Witsken, through a department membership to the association in an electronic form. This document was studied for its valuable information pertaining to a fire department’s training program. GTF&EMS training records were gathered via Firehouse Software, a computer data program utilized by the department. A conversation with a Senior Field Data Collections Agent from the Insurance Service Office Limited (ISO) pertaining to the information they collect in the area of training during a fire department survey, stemmed a search of their web site to obtain information about the ISO and its related training information.

Two surveys were distributed; the first survey was to the 92 members of the GTF&EMS. This survey was conducted by the author visiting each GTF&EMS fire house for one week, and asking the on-duty crews to complete a paper copy of the survey while remaining anonymous. The survey pertained to the current training program and the members' thoughts on improving the program in the future. The second survey was a telephone survey of 14 Ohio fire departments comparable in size to GTF&EMS, evaluating their training programs and who in their organizations oversee their training operations. The telephone surveys began with a contact person in the department. A copy of the survey was emailed to them if they choose to see the questions first, followed by the telephone call some time later. This allowed that person time to compile the necessary answers (only three of the 14 elected to see the questions first). The data collected from both surveys was compiled and analyzed by the author, then entered into this research paper. Copies of the survey results can be found in the appendix section of this document.

Definition of Terms

Ohio Revised Code The *Ohio Revised Code* contains all current statutes of the Ohio General Assembly of a permanent and general nature, consolidated into provisions, titles, chapters and sections. However, the only official publication of the enactments of the General Assembly is the *Laws of Ohio*; the *Ohio Revised Code* is only a reference. Ohio Revised Code. (2014, December 30). In *Wikipedia, The Free Encyclopedia*. Retrieved 21:38, June 18, 2015, from https://en.wikipedia.org/w/index.php?title=Ohio_Revised_Code&oldid=640193208

Firefighter II Required in the State of Ohio for full-time paid (career) firefighters, this course is a minimum 240 hours in length.

<http://www.mywccc.org/Downloads/Firefighter%20Certification.pdf>

Public Employees Public sector workers are those who work for some sort of government agency. *Houston Chronicle. Chron.com* What “Is the Meaning of Public Sector Employment vs. Private?” Retrieved June 18, 2015 from Chron.com website:

<http://smallbusiness.chron.com/meaning-public-sector-employment-vs-private-32297.html>

Private Sector Employees Private sector jobs are those found with employers who are nongovernment agencies. *Houston Chronicle. Chron.com* “What Is the Meaning of Public Sector Employment vs. Private?” Retrieved June 18, 2015 from Chron.com website:

<http://smallbusiness.chron.com/meaning-public-sector-employment-vs-private-32297.html>

Survey Monkey An online survey development cloud based ("software as a service") company, founded in 1999 by Ryan Finley. Survey Monkey provides free, customizable surveys, as well as a suite of paid back-end programs that include data analysis, sample selection, bias elimination, and data representation tools. Survey Monkey. (2015, May 10). In *Wikipedia, The Free Encyclopedia*. Retrieved 20:34, June 18, 2015, from

<https://en.wikipedia.org/w/index.php?title=SurveyMonkey&oldid=661738416>

Pedagogy The art or science of teaching; education; instructional methods. Pedagogy. (n.d.). *Dictionary.com Unabridged*. Retrieved June 18, 2015, from *Dictionary.com* website:
<http://dictionary.reference.com/browse/pedagogy>

Andragogy The methods or techniques used to teach adults. Andragogy. (n.d.). *Dictionary.com Unabridged*. Retrieved June 18, 2015, from *Dictionary.com* website:
<http://dictionary.reference.com/browse/andragogy>

Limitations of the Study

An attempt was made to use Survey Monkey for the survey given to the employees of GTF&EMS. However, because of the way the survey was built, the on-line survey tool was not able to be used. The author instead traveled to the four firehouses of GTF&EMS, met with the on-duty crews, to deliver and ascertain hard paper copies of the survey. It is the author's belief that this lead to a greater data bank due to the number of surveys the author was able to retrieve. However, a limitation to this style of data collection was that only the employees on- duty at the time were able to be contacted. It does not account for employees off work or employees who work "B" shift (evening/nights).

A limitation encountered in the telephone survey was access to the individual answering the questions. The training officer or fire chief was not always readily available to be surveyed. This created prolonged durations in obtaining data in this fashion. Twenty fire departments were targeted for this survey, but only fourteen were able to be contacted. This was a result of difficulty contacting the responsible party for that department. Even with this setback, almost

three quarters of the departments targeted were surveyed, still allowing for an appropriate amount of data to be collected.

RESULTS

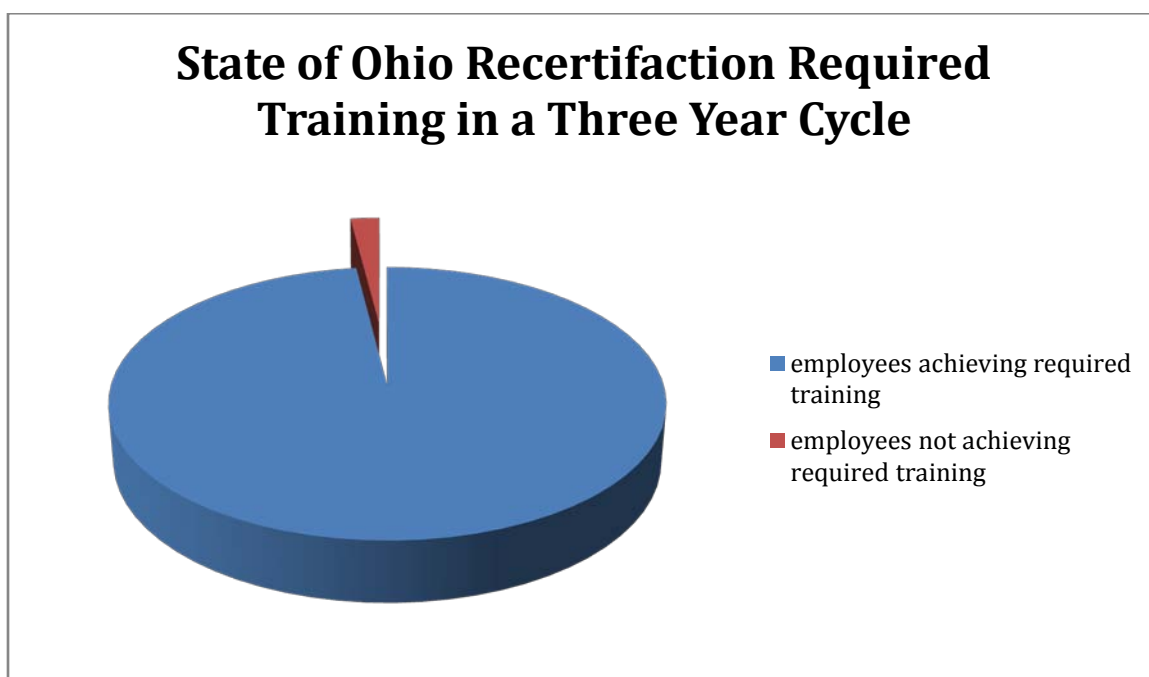
Two surveys were given to two different data sources in the research of this paper. The first was given to the employees of GTF&EMS and the second was a telephone survey of similar-sized fire departments in the State of Ohio. The second survey found that 100 percent of the Ohio fire departments surveyed have a full-time training officer in place, and utilize the company officer or subject matter expert to conduct drills. Thus, the training officer at these fire departments is a single point of contact for the training operation and is responsible for the structure and content of the program.

The Fire Chief of GTF&EMS stated that the second priority behind making emergency details is training. This is also supported by the literature review. Therefore, by reorganizing the GTF&EMS training program in a similar structure, the workload would be managed primarily by someone who has the time and desire to make the program thrive, as well as make the yearly drill schedule consistent and flow accordingly.

The first survey found that 98 percent of GTF&EMS employees do achieve the number of hours required for their state certifications within the three year recertification cycle (see chart 1 below). However, this only reflects the mandated training to keep one's certifications up to date. This does not take into account the additional job performance training that must happen constantly, solely because of the various disciplines modern fire departments face.

Using the data from these two surveys (see appendices III and IV) and the data collected from the literature review, this author concludes that a department the size of GTF&EMS should have a full-time training officer to develop the training program and keep appropriate records of the organization's training program.

Chart 1



DISCUSSION

The purpose of this study is to identify and describe training program models and delivery options for the Green Township Department of Fire & EMS. Currently, GTF&EMS has in place a program with seven different officers participating in the administration of the training program and then the company officers delivering the material. Although the program has met

98 percent of the employee recertification requirements according to an in-house survey conducted for this research paper, alternatives are available. The current training documentation also needs to be improved upon, as it is currently done by anyone who has access to the departments data base (Emergency Reporting).

NFPA 1401 discusses the importance of the use of training records in the formation of a sufficient training program. A training officer should be able to use the training records to evaluate the productivity of the training program, specifically ensuring the training program is producing adequate results. The training records should also be used to identify, not only the deficiencies, but the successes of the department. According to the NFPA, legal matters are also a concern for the fire service. “The maintenance of accurate and complete training records in accordance with this document is one way fire departments can limit their liability.” (pp.1401-4010). For example, if a firefighter is severely injured or killed in the line of duty (100 fatalities and 83,000 injuries annually as reported in *Training Officer Liabilities* (2009)), the National Institute of Occupational Safety and Health (NIOSH) will scrutinize the department’s training program while gathering knowledge of the event. Therefore, it is of utmost importance that a department’s training program can be verified with certainty. Having an appropriate training program can significantly minimize liability. NFPA 1401 suggests keeping detailed records of each departmental and individual training event in a protected file for the entirety of an individual’s career, as well as evaluating and updating the training program at least once a year (2012, p. 10). Data collected in the telephone survey indicates that other departments maintain records more accurately because the training officer alone is tasked with data entry.

Along with training records, NFPA 1401 emphasizes the importance of standardization in regard to a successful training program. NFPA 1401 makes it clear that every member of a fire

department should undergo standardized training. This training should encompass significant planning, preparation and evaluation. Unfortunately, because of the current program utilized by GTF&EMS, training responsibilities are shared among seven people, which does not yield a standardized system. The workload is accomplished during down time by the officers who are still responding to emergency details. The drill schedule is comprised of pre-existing drills found in the department's records that can be pulled back up to fill a void in the schedule. They are not planned, organized, or carried out events. These training events can't be built upon, because the officer scheduling the drills for a given month will not be scheduling again for another three months. The other departments surveyed have a single point of contact which streamlines and clarifies their training records.

In gathering further data for this research paper, two surveys were conducted. The first was given to the employees of GTF&EMS and the second was a telephone survey of like-sized fire departments in the State of Ohio. All departments surveyed for this research paper from across Ohio utilized a full-time training officer. It is the author's opinion that a department the size of GTF&EMS would benefit greatly by having one person dedicated to the sole responsibility of training the organization. By reorganizing the training program with a full-time training officer, the workload would be concentrated to someone who has the time and desire to make the program thrive as well as make the yearly drill schedule consistent and flow accordingly. According to Bradley Pinsky, sub-par programs deny firefighters access to the proper skills and knowledge they need to perform their job adequately. The absence of a designated training officer creates inconsistent performance measures (2013, p. 93). Also, the state-wide survey revealed that firefighters in other departments have a clearer means of skill

evaluation than GTF&EMS. This suggests that employing a dedicated training officer would significantly improve such evaluations.

Even with a full-time training officer in place, it is the author's belief that the company officer is still the best person to deliver the weekly drills. Among all departments surveyed, the company officers conducted the routine drills. This is because of the greater flexibility the company officer has in conducting the drill to fit the company's daily schedule. The company officer has the benefit of evaluating his or her subordinate workforce prior to an emergency detail. The training officer should build the yearly department schedule and conduct any specialty trainings that would affect the department as a whole. This officer should also be tasked with data entry for the sole purpose of unifying the training records.

Since Green Township's Fire Chief (Doug Witsken) previously stated that the second most important task to making emergency details is to prepare GTF&EMS employees for the job at hand, a follow-up interview was conducted with him to evaluate the current status of a full-time training officer. He stated that because of the community ethics and culture, which are very conservative, it would be almost impossible to request a tax levy that would be necessary to accomplish everything desired for the fire department at one time. Green Township has always operated under a "maintain mode" as opposed to looking ahead to the future as far as spending tax dollars is concerned. Over his time as Fire Chief several smaller levies have been put to the voters and all passed, largely due to the minimal size of the request for additional funding. In keeping with this trend of being fiscally responsible, it is more important to increase the workforce by staffing the firehouses than to create another staff position, though he clearly sees the need for such a position. The Chief went on to justify his stance on a training officer by stating that since the State of Ohio has cut approximately three million dollars out of the

township's operating budget, no employees had to be laid off, solely due to frugal spending with taxpayers' money. Using his estimation, a training officer would cost approximately \$120,000 annually including benefits. According to Chief Witsken "That's one and a half positions in a firehouse for the same amount of money spent." Though he admits the current system is flawed, it accomplishes training for the department. However, implementing a training officer would allow those who currently undertake the training programs in a piecemeal fashion to better focus on their primary responsibilities.

RECOMMENDATIONS

With nearly 60,000 residents, Green Township Fire and EMS services the second largest township via population in the State of Ohio. It encompasses the third largest high school, a full service hospital, light industry, and a major east-west highway. The firefighters and paramedics employed within are required to maintain a skill base second to none. The department has an obligation to reinforce its skills required for these firefighters to do their jobs proficiently. When researching the efficiency of the training program, deficiencies were found and better methods were discovered.

As a result, the following recommendations are advised to the department head and Township Trustees:

1. Promote a current Lieutenant to the rank of District Chief of Training. This position should be a 40 hour a week, staff officer. Allow this officer to have full control over the training of new employees, yearly training schedule, and training budget.

2. Hold this officer accountable for the proficiency of the department's training, giving him/her the necessary tools and people needed to make the training program and department thrive.
3. Ensure that this officer has an evaluation process available at the end of every learning session to measure results of the knowledge gained by the learner. This will help improve and modify the topic for future trainings.
4. Continue to allow the company officers to teach their own companies the weekly drills, with procedural changes and department-wide topics to be covered by the training officer.
5. Continue to use "Emergency Reporting" to store electronic training records.
6. It is encouraged that the board of Trustees and Fire Chief move on the promotion of this officer by June 1, 2016. This will allow him/her to establish a new training program by January 1, 2017.
7. In order for the Board of Trustees to approve the creation of this position, the Fire Chief should establish a complete job description, salary range as per Local 2927's contract, and section plan for replacing the promoted Lieutenant.
8. Additional research should be conducted to better establish funding for this position, and an appropriate promotional process to ensure a motivated candidate.

In reviewing the results of this research it is critical that the department has one point of contact for the training program. The Fire Chief currently understands the necessity for this position, but he is limited to the need of allocating funds elsewhere. It is imperative that the Board of Trustees be educated as to why this position is vital to the operation of the fire

department and how it will limit the township's liability through documentation of all training events.

If one attempts to reproduce this topic of research in a future study, it is recommended by the author to ascertain statistical data from all comparable agencies. An option that was not addressed in this research paper was combining the responsibilities of a training officer with that of another 40 hour a week staff position. Further research is necessary to recognize the specific needs and time restraints of combining two staff positions as well as the advantages and disadvantages of such a maneuver.

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Cincinnati, Ohio.

APPENDIX I – INSURANCE SERVICE OFFICE LIMITED’S LIST OF TRAINING CONSIDERATIONS

Here is a summary of the items ISO considers when reviewing a community’s training for firefighters.

- **Training facilities**
 - Drill tower
 - Live fire training structure (including smoke room)
 - 2-acre training area
- **Use of facilities**
 - 18 hours per year per firefighter (for maximum credit)
- **Company training**
 - Company training at fire stations, 16 hours per member per month (for maximum credit)
- **Classes for officers**
 - Certification of all officers
 - 12 hours per year of continuing education for all officers (for maximum credit)
- **New driver and operator training**
 - Classes for new drivers and operators, 60 hours (for maximum credit)
- **Existing driver and operator training**
 - Classes for existing drivers and operators, 12 hours (for maximum credit)
- **Training on hazardous materials**
 - 6-hour session per member per year (for maximum credit)
- **Recruit training**
 - 240 hours per recruit in the first year (for maximum credit)
- **Building familiarization for prefire planning programs**

The community should conduct a prefire planning inspection of each commercial, industrial, institutional, and other similar structure once a year for maximum credit in the Fire Suppression Rating Schedule (FSRS). Records of the inspections should include complete and up-to-date notes and sketches.
- **Records**

When no records exist for training, there will be no credit for items A through H in Section 570 of the FSRS.

APPENDIX II – GTF&EMS TRAINING EVALUATION RESULTS FROM 2015 ISO

RATING

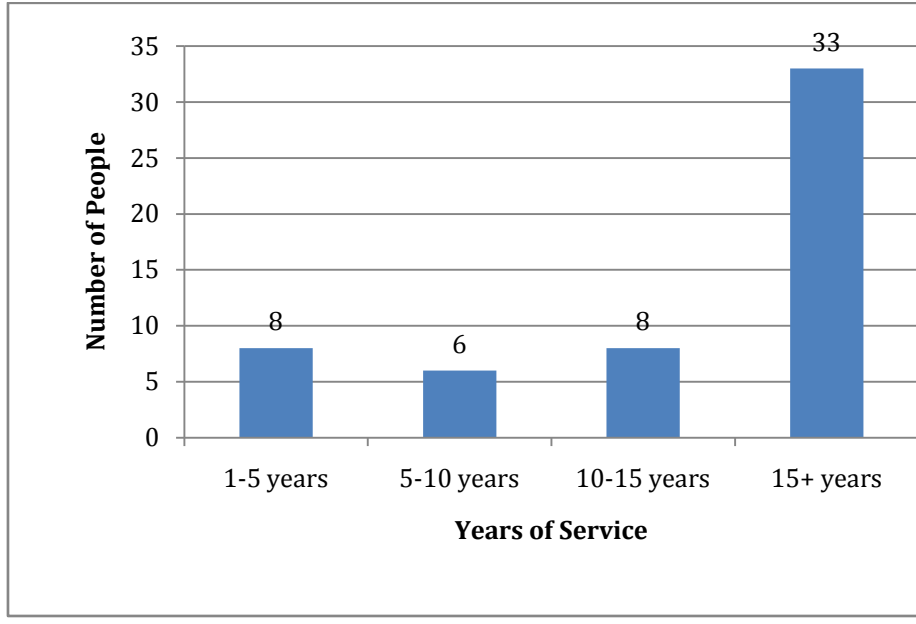
Item 581 – Credit for Training (9 points)

Training	Earned Credit	Credit Available
A. Facilities, and Use For maximum credit, each firefighter should receive 18 hours per month in structure fire related subjects as outlined in NFPA 1001.	35.00	35
B. Company Training For maximum credit, each firefighter should receive 16 hours per month in structure fire related subjects as outlined in NFPA 1001.	8.86	25
C. Classes for Officers For maximum credit, each officer should be certified in accordance with the general criteria of NFPA 1021. Additionally, each officer should receive 12 hours of continuing education on or off site.	12.00	12
D. New Driver and Operator Training For maximum credit, each new driver and operator should receive 60 hours of driver/operator training per year in accordance with NFPA 1002 and NFPA 1451.	2.92	5
E. Existing Driver and Operator Training For maximum credit, each existing driver and operator should receive 12 hours of driver/operator training per year in accordance with NFPA 1002 and NFPA 1451.	2.50	5
F. Training on Hazardous Materials For maximum credit, each firefighter should receive 6 hours of training for incidents involving hazardous materials in accordance with NFPA 472.	1.00	1
G. Recruit Training For maximum credit, each firefighter should receive 240 hours of structure fire related training in accordance with NFPA 1001 within the first year of employment or tenure.	5.00	5
H. Pre-Fire Planning Inspections For maximum credit, pre-fire planning inspections of each commercial, industrial, institutional, and other similar type building (all buildings except 1-4 family dwellings) should be made annually by company members. Records of inspections should include up-to date notes and sketches.	9.60	12

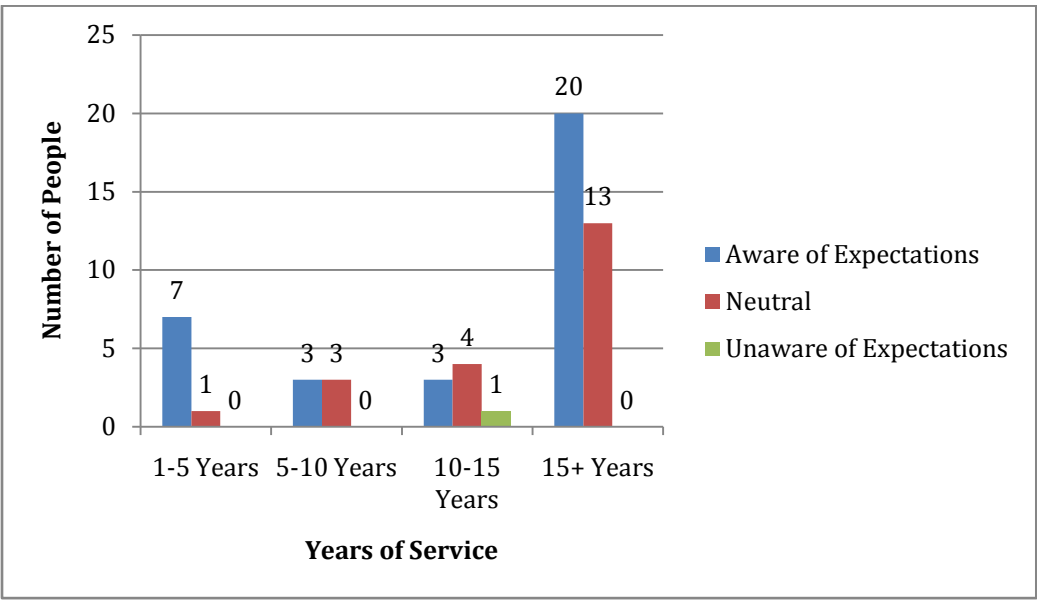
Item 580 "Credit for Training (CT)" = 6.92 points

APPENDIX III – IN HOUSE SURVEY

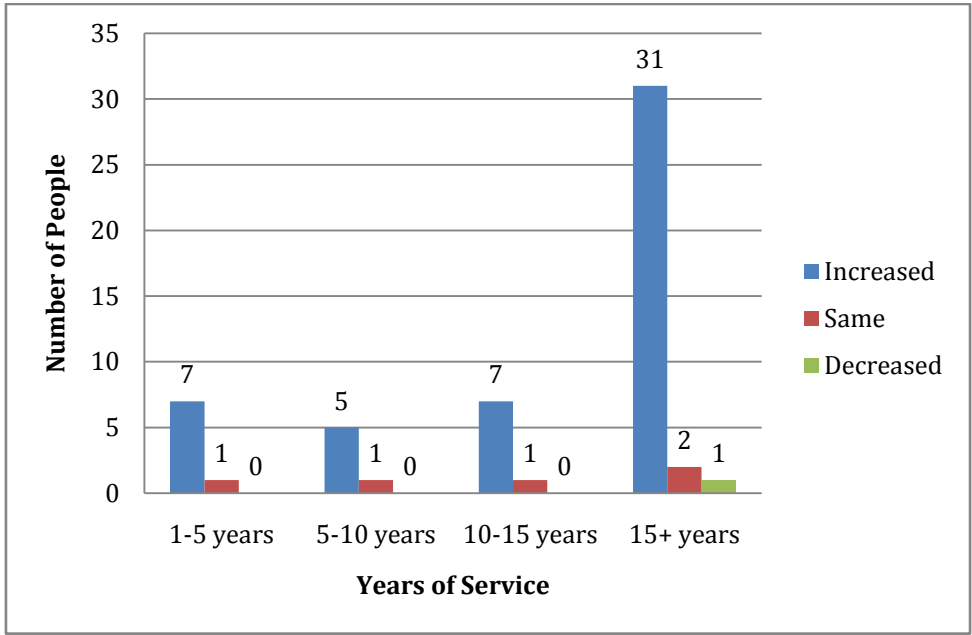
1. How long have you worked for Green Township Department of Fire and EMS?



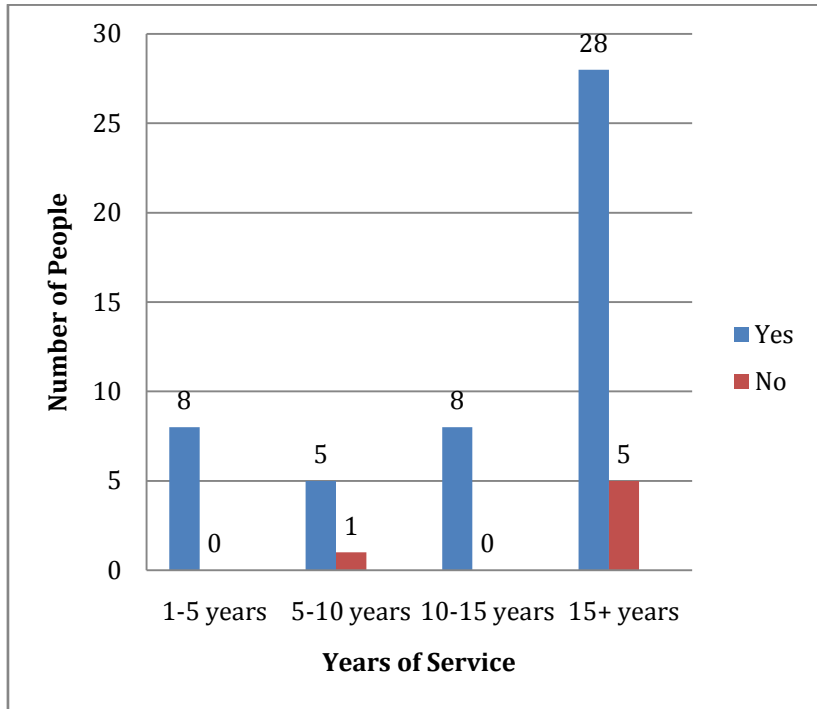
2. What level of awareness do you have in regard to departmental training expectations?



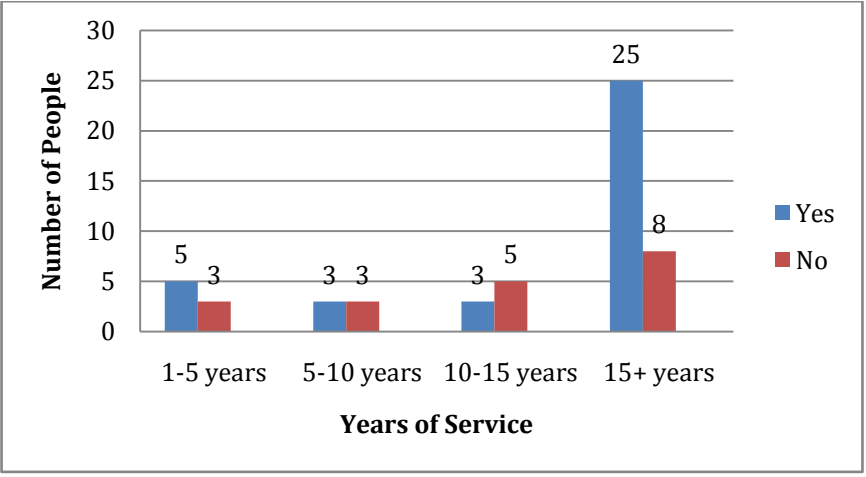
3. What is your training level now, compared to the day you started with Green Township Fire and EMS?



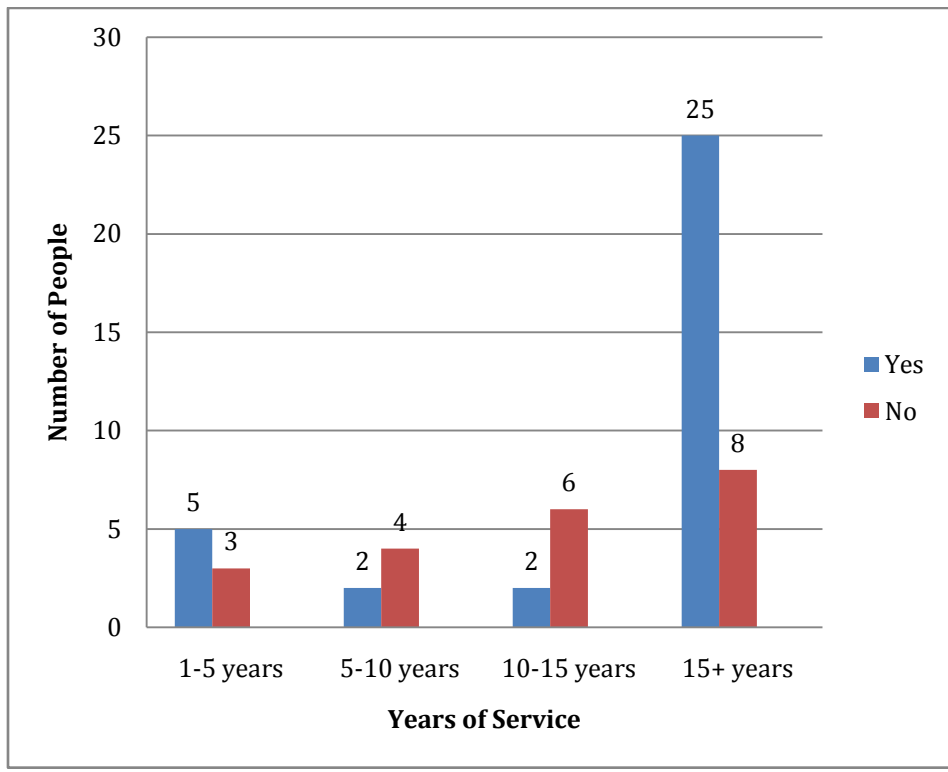
4. Are you getting enough annual training hours from the department's training program to fulfill the state's educational requirements?



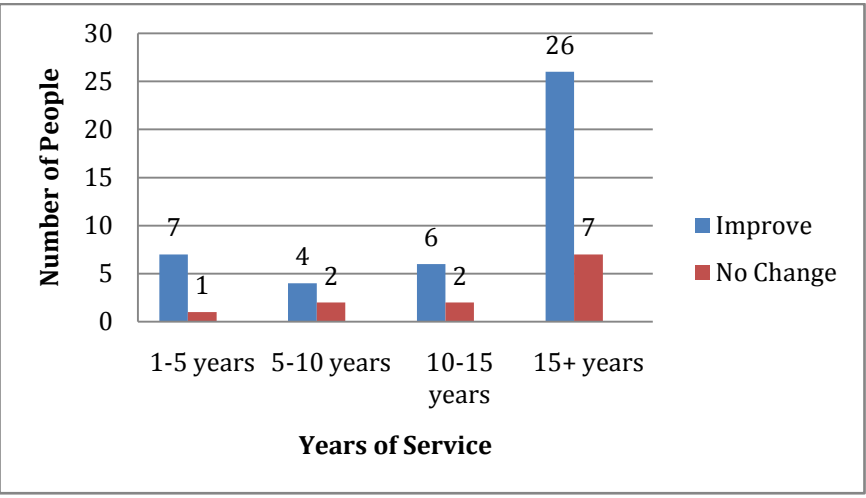
5. Are you currently aware of how the department's training program is structured?



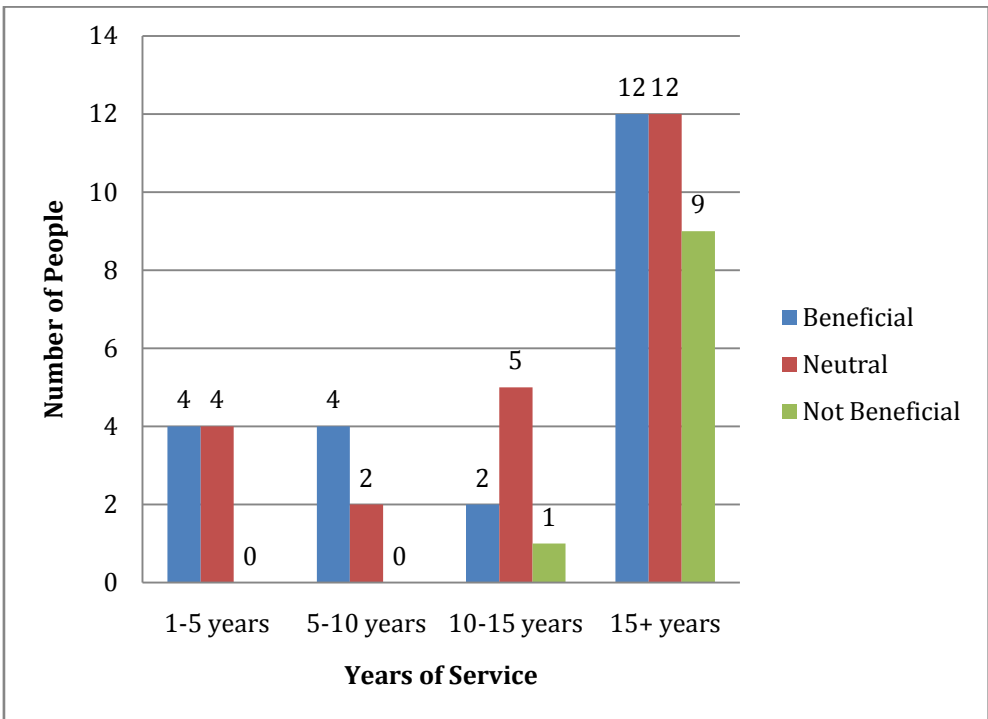
6. Are you aware that seven different officers have some level of participation in the department's training program?



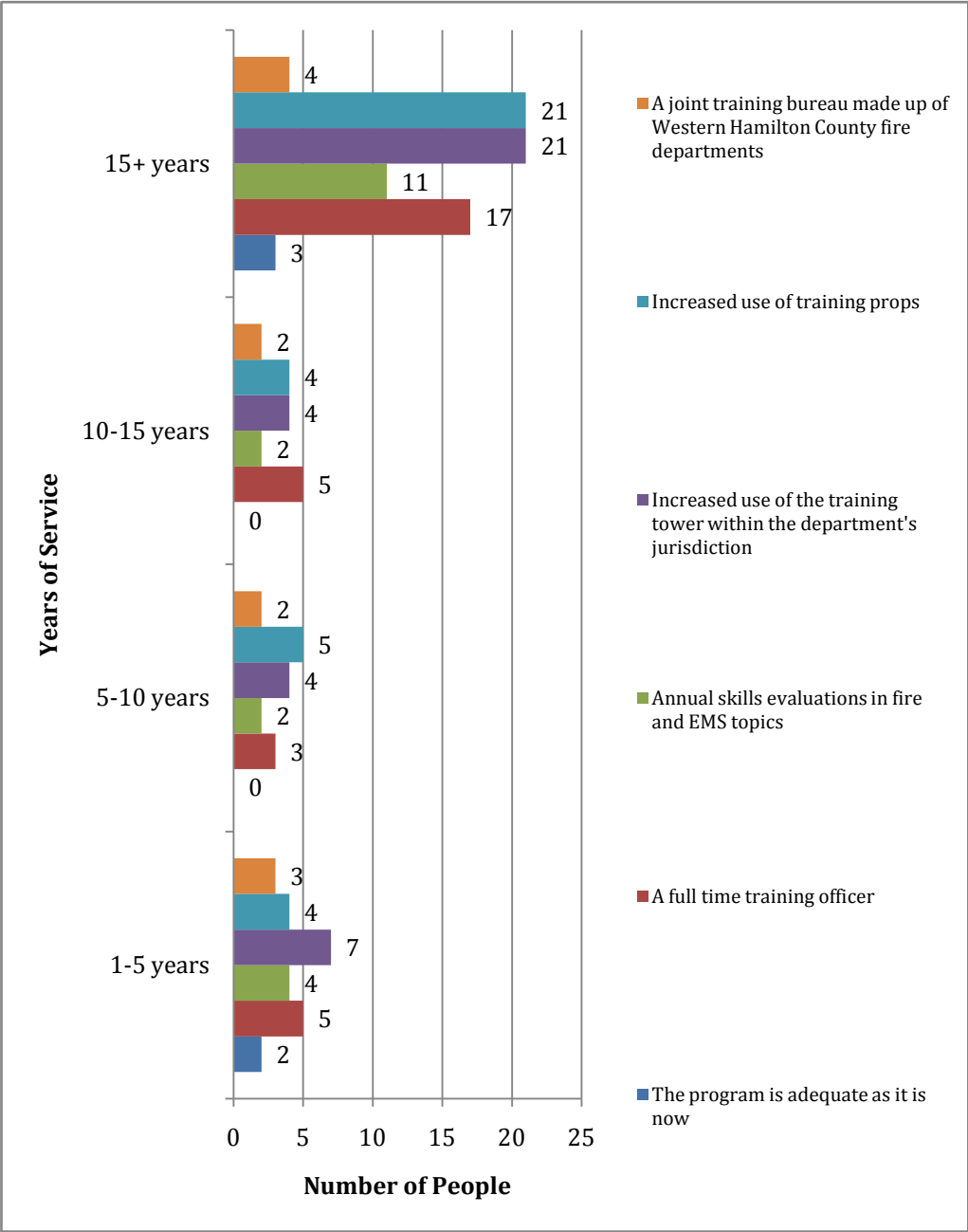
7. Would a full-time training officer impact the development of the department's training program?



8. In your opinion, is Green Township's participation in the Western Hamilton County Training Group beneficial to Green Township?



9. What other training methods could be used by the department to improve the training program?



10. Please rate the following topics on a scale of 0-10 according to how well you have been educated in these areas. This could be in-house training or external training.

(0= not at all 10= very well).

	1-5 years	5-10 years	10-15 years	15+ years
Incident Command	7.75	6.8	6.75	7.75
Departmental Policies	7.88	6.8	6.5	7.2
Live Fire Training	6.75	7.3	5.25	6.79
Legal Issues	5	4.3	3.38	4.36
Driver/Pump Operations	8.88	6.8	7	7.1
Reports and Records for EMS	9.1	5.8	7.13	7.36
Career Advancement/Officer Development	5.5	3	4.13	4.76
EMS Equipment	8.25	7.3	6.88	7.48
Reports and Records For Fire Inspections	4.88	2.8	4	5.6
Hazardous Materials	5.38	3.3	4	5
Public Relations/Public Education	7.13	6	4.38	5
Accountability	7.88	7.3	6.63	7.2
Ground Ladders	8	7.2	6.75	7
Hose Advancement	8.38	9.3	5.88	7
Emergency Reporting Software	6.5	5.2	6	6
Aerial Tower Operations	6	6	4.13	6
Conflict Resolution	7.3	5.2	3.5	3.3
EMS Protocol	8	9	7	6.6

APPENDIX IV – PHONE SURVEY OF OHIO FIRE DEPARTMENTS

1. How many personnel does your department employ? Average of 84

2. How many fire stations does your department operate? Average of 3.4

3. Does your department have a training program? Yes:14 / No:0

4. Does your department have a Mission Statement? Yes:12 / No:2

5. Does your department's training program support the Mission Statement? Yes:11 / No:3

6. Does your department utilize a full time training officer? Yes: 14 / No:0

7. Who administers your department's training?

 Training Officer: 0 Company Officer: 14 Subject Matter Expert:0

8. Does your department have annual training objectives that all department members must meet? Yes: 9 / No: 5

9. Does your department utilize an on-line training program? Yes: 9 / No: 5

10. How do you rate the overall quality of your department's annual training?

 Needs improvement: 2 Meets the minimum requirements: 9 Exceeds requirements: 3