

Improving The Fire Training Procedures
At The
Chardon Fire Department

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CERTIFICATION STATEMENT

I hereby certify that the following statements are true:

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ABSTRACT

This research paper documents the study of improving fire training at the Chardon Fire Department. *The problem* was to evaluate current training at the department. This study was to investigate what changes are needed to establish a more proficient training program, conducive to the job of firefighters. *The purpose of this study* was to research, plan, analyze, develop and implement a well organized program. Utilizing survey research and establishing benchmarks through this project, this paper sought to answer;

Research Questions:

1. Are the firefighters at the Chardon Fire Department getting the proper training?
2. What training needs be done to bring the department into full compliance with the State of Ohio?
3. What type of future training will enhance the Fire Department's ability to handle all emergencies?
4. What is the proposed realistic plan for bringing all Fire Department members up to minimum State of Ohio standards?

The procedures used for this OFE research project included three surveys:

One at Chardon Fire Department, a second from 25 other fire departments, and a third from Chardon area industries.

The results of the Chardon Fire Department survey concluded that members feel either the current training is adequate, or they are not getting enough. The results from the 25 fire departments attempted to gain information about fire training from differently staffed departments. The goal was to research whether training was conducted differently, or if it was the same. Wide ranges of data were collected. The results from the

third survey were to try to find out how the industrial world in the manufacturing sector handles training, and for what purposes.

The recommendations of the author are to find out what type of training is mandated by the state and to research the standards in training set by the *National Fire Protection Administration*.

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INTRODUCTION

Statement of the Problem

In today's society, many people are paying high taxes where they live, or they have moved to a suburb of a large city or rural area. These people expect the same type of fire service at their current residence that they enjoyed at their last. This expected service is one of excellent, well-maintained fire equipment, enough firefighters on duty to move mountains and a well-trained staff knowledgeable in all areas of firefighting.

The problem this study will address is the evaluation of the current firefighter training program at the Chardon Fire Department. This study will also investigate what changes may be needed in order to establish a more proficient training program which is conducive to the overall job performance of firefighters at all types of emergencies. The areas to be examined will be past, present and possible future learning practices, and how much training will need to be done.

*The purpose of this study is to research, plan, analyze, develop and implement a well organized training program at the Chardon Fire Department. This study will also evaluate both State of Ohio and federally mandated training such as *NFPA 1001, (2002) Firefighter Professional Qualifications*. *NFPA 1001* covers such training activities as donning and doffing protective equipment, using hand tools, ground ladder placement, hose line placement, salvage, overhaul, and how to hook a fire engine to a water source.*

Another mandated training that will be evaluated is *NFPA 1002, (2002) Standard on Apparatus Driver / Operator Professional Qualifications*. This standard covers all types of driving situations that a fire apparatus driver may encounter. Some of these situations include pumping an engine, driving on rural and city streets, going around turns, driving under bridges, and backing into a fire station or other tight areas. This study

will determine where the department currently stands on meeting these requirements.

This study will be used as a guide to set the standard for future training by all members of the Chardon Fire Department. In order to establish benchmarks and to chart the training of all firefighters, an evaluation shall be done. Firefighters will be evaluated after their probationary period, after completing mandatory training, and every six months thereafter by platoon officers. After these benchmarks have been reached, it will be decided if more training is needed in certain areas. This study will also be given to the local public officials, which will inform them of the change, and enlighten them on the progressiveness of the department.

This study will also be used as a tool to set training standards, in an attempt to gain points on a possible future Insurance Services Office (ISO) grading in the area of fire training.

A perception many area fire departments surrounding the Chardon Fire Department have is one of trust and knowledge that when the Chardon Fire Department is called, the emergency will be handled well. The Chardon Fire Department was the first fire department in Geauga County. For many years, as other departments struggled to get started, they would always call on the Chardon Fire Department in time of large incidents. Still, to this day at large mutual-aid incidents, fire officers from other departments have praised the effectiveness and professionalism of Chardon firefighters. Even though it is nice to hear these words, the truth is without the proper training by all members of the department, one cannot expect all emergencies to be handled with text book precision.

Current and past television shows such as *Third Watch*, *Rescue 911*, and *Emergency* which first aired back in 1970, sometimes give the public a feeling of

security. The public believes the same type of well-trained fire service personnel they see on television is exactly the type of service they will receive in their own hometown.

The Chardon Fire Department is in the process of changing from an all-volunteer department to a combination department made up of both full and part-time employees. Many members still respond from home on large incidents, but are paid part-time wages once they arrive at the station. Due to the fact that the department is in this transition period, it is necessary to bring all part-time members up to the minimum 120-hour State of Ohio firefighter certification level.

The research method that will be used in this research project is through both evaluative research and action research. As part of the evaluative research, survey research will be done at the Chardon Fire Department to look at current and possible future training. Action research will be done in that the findings of this project will be used to establish new policies, training programs, and training benchmarks during the course of researching material for this paper.

The research questions this study will investigate are:

1. Are the firefighters at the Chardon Fire Department getting the proper training?
2. What training needs be done to bring the department into full compliance with the State of Ohio?
3. What type of future training will enhance the Fire Department's ability to handle all emergencies?
4. What is the proposed realistic plan for bringing all Fire Department members up to minimum State of Ohio standards?

Background and Significance

The Chardon Fire Department was established in 1877 and has been largely volunteer since then. The department consists of one Chief, one Assistant Chief, three Captains, four Lieutenants, a Fire Prevention Officer and 35 firefighters.

The Chardon Fire Department apparatus consists of two engines, one engine/tanker, one ladder truck, two rescue squads, a light hazardous material unit, a grass unit, and a command car.

The Chardon Fire Department provides fire protection and emergency medical services as well as haz-mat and special rescue on a smaller scale. These services are provided to the City of Chardon, Chardon Township, Aquilla Village and Claridon Township, all located in Geauga County, about 30 miles east of the City of Cleveland Ohio. The population of the area the department serves is 12,720. The City of Chardon is the county seat as well as the home to two elementary schools, one junior high school, one high school, three nursing homes and many medium-and light-industrial and commercial facilities. The population the department serves doubles during the weekday business hours putting even more of a strain on the department. The department also protects University Health System's Geauga Regional Hospital located in Claridon Township which at all times is a high occupancy / high hazard facility for the department. Through Claridon Township also are many flight alignment beacons for airplanes descending into Cleveland Hopkins International Airport.

The Chardon Fire Department is a non profit organization that contracts with the four entities to provide both fire and rescue protection. Fire contracts are covered by tax levies. In the hard financial times that are occurring nationwide, our area is not immune

to this current situation. Many services in Chardon City and Geauga County have been cut or department budgets reduced.

In the last fifteen years, the number of emergency calls the department handles has quadrupled. In 1988, the department handled 388 calls compared to 1,387 in 2004. With this many emergency calls, the department has had to move from all volunteer to hiring four full-time employees and many part time employees in order to ensure that emergencies are handled around the clock. In order to accomplish this task, it has taken over sixty percent (60%) of the operating funds, which does not leave much to cover the rest of the department's operating expenses.

Due to the fact that the department is in this transition period, it is necessary to bring all part-time members up to the minimum 120-hour state firefighter certification level. Currently the department has twenty-eight members (62.22%) trained at the 240 hour certification level, one member (2.22%) trained at the 120 hour certification level, and sixteen members (35.55%) trained at the 36-hour, volunteer certification level.

Another area that is lacking is the amount and quality of daily in-service training. Many times, firefighters are unable to perform training due to calls or other day to day obligations within the department. A better way must be found to make sure training is done.

The Chardon Fire Department was recently graded by the Insurance Services Office (ISO), and although the department did well in the area of training, more points could have been gained if the department had a designated training ground.

During this authors' tenure in the OFE program, it will be a goal to establish a training ground facility to be used on a regular basis.

In the old days, Chardon Fire Department was no different than many other all-volunteer fire departments. Training night, or meeting night, meant going to the station and seeing friends, standing around gossiping all night, playing cards, smoking cigars, and doing just about everything else but fire training. Today things are much different, the firefighter and paramedic job is much more in depth, and skills need to be fine-tuned on a regular basis. Today at the Chardon Fire Department, through mandated training, things are improving. Weekly training nights have produced some excellent educational learning that has been noted when the department goes on calls and when standard operating guidelines are being followed. It is apparent that training on a more regular basis stops freelancing on the fire ground and makes for more effectively-run incidents. It is the goal of the department to take the level of the training in both fire and EMS to a level that can be called excellent.

The problem of trying to obtain better training is the belief that practice makes perfect, or at least, is better than not practicing at all. The results of this research project will be used to build a better training program within the department including both lecture and hands-on education.

It is the belief of this author as well as many in the fire service, having a well-trained fire department is an asset to the community. Many people today expect great service when they dial 911. Residents do not deserve nor do they want someone in a fire truck showing up and not having a clue of what to do when their home is on fire. More important is when their health is failing, or they are injured, they want well trained, well-equipped paramedics by their side and fast.

Having an under trained fire and rescue service in a community can have the potential for a significantly bad outcome in the event of a large or even a small incident.

Having a well-trained staff can boost morale within the department and boost confidence within the community.

The future significance to having a well trained department is that a standard will be set to a high level for new recruits. They will be required to under go a set of training guidelines in order to make probation. New recruits will have an understanding of what is expected of them while handling emergencies. This is different from past practices when members joined the department, received a fire coat, boots and a helmet, and then were allowed to jump on the fire engine and go to the next fire. On the job training and a standard of excellence will be set in place, which will help promote great knowledge and professionalism in any type of emergency.

Literature Review

The Chardon Fire Department over the last five to ten years has become what is known as a combination fire department. A combination department is made up of part-time and full-time firefighters. In order for this to be done many members who were strictly volunteer before this time, are now part-time. Due to this changing process it is necessary for the department to meet the full compliance for firefighter training certification levels the State of Ohio has set. The firefighter will have to be certified at the Firefighter II level for full-time employees and at the Firefighter I level for part-time employees.

According to the *Ohio Administrative Code, Section 4765-11-11 Firefighter I.*

(A) A program to train a Firefighter I shall require that participants successfully complete a fire training program of not less than one hundred twenty hours that meets all the objectives in the current NFPA standard 1001, Firefighter I, as set forth in the NFPA

1001 Standard for Fire Fighter Professional Qualifications (2002 edition), which is available at www.nfpa.org. The training shall commence and end within a consecutive twelve-month period.

(B) A program to train certified volunteer firefighters to the Firefighter I level shall require that participants successfully complete a fire training program of not less than eighty-four hours that meets all objectives in the current NFPA standard 1001, Firefighter I, as set forth in the NFPA 1001 Standard for Fire Fighter Professional Qualifications (2002 edition), which is available at www.nfpa.org. The training shall commence and end within a consecutive twelve-month period.

According to the *Ohio Administrative Code, Section 4765-11-12 Firefighter II*.

(A) A program to train full-time firefighters shall require that participants successfully complete a fire training program, of not less than two hundred forty hours that meets all performance objectives in the current NFPA standard 1001, Firefighter I and II, as set forth in the NFPA 1001 Standard for Fire Fighter Professional Qualifications (2002 edition), which is available at www.nfpa.org. The training shall commence and end within a consecutive twelve-month period.

(B) A program to train a certified Firefighter I to the Firefighter II level shall require the participant to successfully complete a fire training program of not less than one hundred twenty hours that meets all objectives set forth in the current NFPA standard 1001 for Firefighter II as set forth in the NFPA 1001 Standard for Fire Fighter Professional Qualifications (2002 edition), which is available at www.nfpa.org. The training shall commence and end within a consecutive twelve-month period.

Some members of the department are trained at the volunteer level the State of Ohio requires but that will soon need to change to one of the higher levels. According to the *Ohio Administrative Code, Section 4765-11-10 Volunteer Firefighters*

(A) A program to train volunteer firefighters shall require that participants successfully complete a fire training program of not more than thirty-six hours that meets the prerequisites to participate in live burn evolutions as listed in the NFPA 1403 Standard on Live Fire Training Evolutions (2002 edition), which is available at www.nfpa.org, and fire department orientation as listed in NFPA 1001 Standard for Fire Fighter Professional Qualifications (2002 edition), which is available at www.nfpa.org. The training shall commence and end within a consecutive twelve-month period.

(B) A program to train volunteer firefighters shall not include live burn evolutions. Participants in a program to train volunteer firefighters shall be instructed that they cannot perform the duties of a firefighter or participate in live burn evolutions prior to obtaining their state certification.

Many members of the department who are in need of higher firefighter training have a hard time finding the time to conduct or take part in necessary training needed to keep fire and rescue skills sharp. This lack of time comes from employees having to work two jobs to make ends meet as well as outside the department continuing education, such as medical in-services for those who are emergency services trained. Home life, raising children and other family issues can lessen the available training time also. In the article *No place in the fire service for lifelong learning shortcuts. (Coleman, Ronny J., July 2002, Fire Chief Magazine pg. 20-22)* writes, “The more important question to be asked is this: How much training does it take to keep a firefighter competent? How much time

are you devoting to training within, and is it giving you results?" The Chardon Fire Department needs to ask the same question.

It is obvious on the fire ground who has good training skills and who does not. It is also very obvious that a firefighter who trains all the time does better in real situations than a firefighter who is only able to train once and a while. Currently, training at the department is held every Thursday night. This training is made up of both fire and EMS subjects. Without any real reason, these trainings can either be well-or poorly-attended. *Coleman* also writes in his article "Unfortunately we've also continued adding to the list of requirements to be an effective firefighter without always considering the continuing education consequences. These can include such problems as skills degradation, information half-life and life long learning." Skill degradation is when a person learns how to do something and then slowly forgets it over time. The difference here is if a person learns a skill and then has to perform that skill years later, that person will not be as effective as a person knowing the same skill, who practices it all the time.

Information half-life has to do more with learning new things about fire fighting like, pre-planning new buildings and how to perform a new way of rapid intervention. If these new concepts in the fire service are not reviewed or practiced, then it is believed the firefighter over a period of time may only remember half of what they originally learned.

Life-long learning is basically what is required by the fire service in order for firefighters to stay on top of their game. Some firefighters believe that once they learn a skill, they never have to practice it again. Many times this happens to old firefighters who have been in the service for many years. They figure that they've "been there, done that" and the same stuff that worked 30 years ago will still suffice today.

Coleman also writes “training is the heart and soul of competency. Even though failure to make training a high priority within an organization isn’t immediately fatal, over time it will weaken even the most powerful organizations.” Working with many different fire departments through mutual aid at large incidents, it is very easy to tell who has good training and who does not.

The researcher will also evaluate training in the private industrial sector and look at different training procedures outside of the fire service. In the *Effective Supervisory Practices, 1995 Third Edition (International City/County Management Association) pg82 Planning a training program*, the following are items to be covered as part of a training program;

- What do you want employees to know, or do, and at what skill level?
- How soon do employees need this training?
- What do employees already know?
- What do employees think they need to learn?
- What is needed to provide this training in the way of tools, teaching aids, money or instructors?
- How much time will be needed, and how should instruction be scheduled?

Once these answers are known, then the criteria for a good training program for employees can be developed.

The fire service is not much different than the corporate world when it comes to training. Corporate supervisors in charge of training employees are just as interested in employee performance as fire officers are in firefighter performance during emergencies.

In the article *Companies get tactical about employee training*, *Pratt, Mary K., Boston Business Journal*, writes, "Training isn't something you just do to learn about a

new product, learn a new skill or learn about software. It's about performance," said Danielle Durocher, the Boston-based vice president of enterprise learning outsourcing at Aon Consulting Inc. "The real trend is to move away from one-size-fits-all. We're finding a much more tailored approach to leverage the talents of the individual."

One of the issues at the Chardon Fire Department is the changing from an all-volunteer department to a combination department made up of both full-time and part-time personnel. Many of the members who were strictly volunteer believed that coming to training once in a while was okay. Another belief was that coming to the weekly training night meant standing around gossiping and never lifting a finger to train. In the article *I'm a Volunteer: you can't tell me what to do.* (Gasaway, Richard B., December 2003, *Fire Engineering Magazine* pg. 12-14) writes "Hold everyone in the organization to the same standards and expectations. The rules and the duties in the job descriptions are for everyone to follow." Gasaway writes about making sure that as a leader, you are fair to all members when it come to training and not having a pattern of making some train and some not. It will be the intent through this research project to find what will need to be done in order to bring all members to the same levels of certified fire training.

Another way to make training attendance better will be to change them in order to meet new standards and techniques, such as innovations in structural firefighting, incident command tools, and auto extrication, to name a few. In the article *Continue the Tradition of Training*, (Landreville Paul G., March 2004, *Fire Engineering Magazine* pg. 103-112) writes, "Training Firefighters - This can make for stimulating conversation, can be very controversial, and demands commitment. To achieve the goal of always being ready when our equipment, knowledge, and acquired skills are required, fire departments must continually train. Participating in training each week, year after year, can become

tiring and down right boring. This is partly because the styles and customs of training departments can be so rich in tradition that things rarely change.”

One way of making training seem more fun is to do more hands on training. Go get a junk car, get out the Jaws of Life and use them. Put on the hazmat suits and practice decon, pull hand lines off the engine and practice flowing water, or review nozzles and pump pressures. *Landreville* also writes about “training like you respond.” If there is a possibility that the second engine company is well behind the first engine in response time, then training needs to encompass what the initial crew needs to accomplish while waiting at the scene. Training also needs to be done so that each firefighter on the department knows what their job will be regardless of what responding unit they are on. Each seat on any given piece of fire apparatus also has a job to do whether it is pulling a hand line, hooking up to a fire hydrant or performing incident command.

Once training has been conducted, it must be recorded and each firefighter must get credit for not only attending but for participating as well. In the article *Courses of change*, (*Dr. William Jenaway, April 2004, Fire Chief Magazine, pg. 86-90*) writes, “Today’s training, for whatever reasons, must involve not only the actual performance of the task, but how to professionally manage the people and the process that result in the completion of the job. Where required, the training must be recorded and evaluations completed to ensure that learning has occurred.”

One of the areas that will be examined through this research project will be to look at the current way training is recorded and to see what can be done to improve this process.

Jenaway also writes, “As the frequency of large fires has been reduced, the increase of hazardous materials, terrorism, EMS, technical rescue and related new hostile

environments requires new tools, techniques and training. Education must be geared to these changes and driven by risk assessments and pre-emergency planning.”

We in the fire service will never run out of different subjects to train on. Thirty years ago, fire departments generally did one thing -- put out fires. Today we are like the garbage man, “we pick up everything.” The fire department is called to handle just about everything from EMS, to haz-mat, fire alarms, carbon monoxide alarms, flooded basements, electrical problems, and even plumbing deficiencies. The general public assumes and expects firefighters are masters of all trades.

As firefighters, we must train often and try to cover as many topics as possible. The emergency scene is no place for training, but is a place to gain experience and return to your fire department and critique the situation. Once all has been reviewed about an emergency situation, it is time to train some more in order to cover areas where things may have not gone quite right.

This subject is covered in (*Fire Attack, Second Edition, Strategy and Tactics of Initial Company Response, May 2003, pg 2*) which states, “when responding to an alarm, firefighters receive reconnaissance about the position, strength, and location of the fire. This information can be received from the communications center that questions the caller about the situation. The company officer and members of the company can reflect on previous incidents, on their experience, and their knowledge of the response district to acquire important information about the incident.” As a firefighter, you should have solid understanding of fire and of fire behavior, so that you don’t get surprised on the fire ground.

In summary, the NFPA standards 1001 and 1002 have been very helpful in outlining the current standards that need to be met by firefighters. These standards give

guidelines that will be very helpful in establishing proper training procedures at the Chardon Fire Department.

Procedures

A part of the research for this OFE project was collected through three different surveys. The first survey was done at the Chardon Fire Department and given to all other members of the department. The second survey was sent out by U.S. Mail to twenty-five other fire chiefs in the Northeast Ohio-area and to the fire chiefs in Ohio that were enrolled in the Ohio Executive Fire Officer Program Class 4. The third survey was a face-to-face interview with the training administrators at four Chardon Ohio area manufacturing companies in order to research how training is done outside the fire service in the industrial world. The industrial survey looked at training for newly hired employees and continuing education for senior employees. Other data collected included fire service articles, National Fire Protection Administration (NFPA) Standards, State of Ohio training requirements, and Occupational Safety and Health Administration (OSHA) standards.

The first survey done at Chardon Fire Department was done in written form and placed in the mailboxes of all members of the department. The survey was a sample of the total fire department population, as not all surveys handed out were return by the deadline. The survey covered the current training situation, and asked for opinions on future training at the department. Forty-three surveys were handed out to all firefighters and officers on the department. Of the forty-three handed out, twenty eight or (65.12%) were returned. The surveys were completely anonymous, although some members put their names on the paper. (See appendix A survey questionnaire)

On the survey, a question was asked of department members to rate how they felt about the current training situation. The choices were: “Not enough is being done,” “Current training is sufficient,” and “Too much training is being done”.

Other questions on the survey included: how the member gets their fire service training; when, where, and whether or not they are able to do much training at all; How many years have they been with the Chardon Fire Department; should the department have mandatory training?, and what type of training the members would like to see conducted at the department in the future.

The second survey was sent out to Northeast Ohio fire chief as well as the chief officers of the Ohio Executive Fire Officer Program class 4. This survey produced many different results about training and how training is conducted. This survey is also a sample of all of the fire departments in Ohio. Twenty-five surveys were sent out and twenty (80%) of them were returned before the deadline date. The surveys were purposely sent out also to a mix of departments with different kinds of staffing. The survey attempted to gain information from volunteer, combination including volunteer / part-time, and part-time / fulltime, and to all full-time departments.

The departments surveyed handle between one hundred and five thousand emergency calls per year. Of the twenty departments that returned surveys, two were staffed with full-time firefighters only, twelve were staffed with a combination of volunteer / part-time or part-time / full-time, and six were all volunteer.

(See appendix B survey questionnaire)

The third survey that was done included four Chardon Ohio manufacturing facilities in an attempt to look at how industry conducts employee training.

The researcher sat with the training administrators of each company for approximately 20 minutes each. This survey was also only a sample of all industry in the Northeast Ohio area.

One of the facilities surveyed produced rubber and rubber parts for the automotive industry, and for home appliances. The second was a metal coatings plant where different metals such as zinc, aluminum and copper are used to cover various metals parts. The third facility manufactures different screens that are used in water treatment plants or in different industry where water needs to be filtered. The fourth company produces fiberglass tanks used in homes to store well water under pressure.

Some of the questions asked of the facilities training administrators included: Information about newly hired employees, department job specific tasks, mandatory training, and continuing education. Other questions were based on what type of training is done to comply with the Occupational Safety and Health Administration (OSHA) guidelines, Insurance Services Office (ISO) standard Q9001, and training in Material Safety Data Sheets (MSDS) which informs employees how to handle hazardous material incidents within the facility. (See appendix C survey questionnaire)

Limitations of the surveys conducted include not having a survey returned by all members of the Chardon Fire Department, the survey of other fire departments only being a small sample of departments in Ohio, and visiting four manufacturing facilities only gave a small sample of Northeast Ohio industrial training.

This author was able to reach the final results in this project through research material obtained through documents such as *Effective Supervisory Practices, 1995 Third Edition (International City/County Management Association)* which provided a guideline on how to establish a training program. Various fire service articles were also used

concerning how to make training interesting for volunteer firefighters and how they should be held to the same training standards, and how training is a life-long learning experience.

Ohio Administrative Code and National Fire Protection Administration standards were researched in order to answer some of the research questions.

Part of the research done in this project was action based. It is this authors' goal to improve the training at Chardon Fire Department during and after the completion of this project.

As part of this project and through information gained while doing research, benchmarks were established in order to start the process of bringing firefighters at the department up to State of Ohio minimum standards listed earlier in this report, which revolves around actual on duty hours worked, whether part-time or full-time.

In November 2004 at a Chardon Fire Department Officers meeting made up of lieutenants, captains, an assistant chief and the chief, it was decided to establish a time line in order to bring all part-time employees up to the one hundred twenty hour part-time firefighter training level. The time line set was that all part-time members needed to be enrolled in a one hundred twenty hour program on or before July 1, 2005. The second benchmark set was that any member who did not obtain a one hundred twenty hour firefighter training certificate by January 1, 2006 would not be allowed to work on duty at the station.

The next benchmark set was for officer training. Starting in 2005 all fire officers are mandated by the chief to attend some officer-type training on a yearly basis. This training may encompass incident command, interaction with employees, or mission, vision and goals. The department will also try and follow NFPA 1021 *Standard for Fire*

Officer Professional Qualifications, which specifies the minimum job performance requirements for service as a fire officer.

Another benchmark established in 2005 includes sixty hours of mandatory fire training a year where 24 hours must be hazardous materials, 12 hours engine company operations, 12 hours of ladder company operations, and 12 hours of special training which can be such items as report writing, preplanning, or grass jeep / wild lands fire training.

In September 2004 the captain in charge of training started entering into Firehouse software all trainings completed by fire department members in order to keep track of any member that may be lacking. Firehouse software is a program that keeps track of many fire department functions such as incidents, fire hydrants, equipment inventory, hose testing, fire prevention activities and training.

Many different mandatory trainings were established. Firefighters had to complete a training check off-sheet on the department's engine tanker by July 1, 2004, and a second check-off sheet on the department's ladder truck by February 1, 2005. Both trainings closely followed NFPA 1002, *Standard on Apparatus Driver / Operator Professional Qualifications*. Those members who did not finish the two assigned mandatory trainings were not allowed to sign up for on-duty shifts after the assigned due date. Once the training was completed, they were allowed to resume signing up although they may have lost valuable time slots.

Also in an attempt to follow NFPA 1002 more closely, an Ohio Emergency Driving Course is given twice a year in the spring and fall. All members must attend at least one of these classes each year.

Research through this project is being used to set today's and future department standards, while utilizing Ohio Administrative Code that governs laws in firefighter training.

In February 2005, Chardon Fire Department revised its probationary training manual to more closely reflect NFPA 1001, *Firefighter Professional Qualifications* and NFPA 1002, *Standard on Apparatus Driver / Operator Professional Qualifications*.

After conferring with the City of Chardon Council in 2002, and waiting almost two years for the City's waste water treatment plant to be built, the fire department was given approval to establish a firefighter-training ground on city property near the treatment plant. In September 2004, two ocean going shipping containers -- one eight and half feet wide by forty feet long and one eight and half feet wide by twenty feet wide -- were purchased. Fire department personnel obtained the donation of a backhoe tractor and ground was cleared to put the containers in place. Another donation by a local crane company allowed the fire department to place the smaller container on top of the larger one.

At the time of this research project, the containers are being made to resemble a small house with doors, windows, a roof and a chimney.

Fire department members are also working on making vent hatches and escape routes in order to comply with NFPA 1401 *Standard for fire training ground burn buildings*.

Having a training facility available will allow the department to practice such skills as interior structural firefighting, first due engine company operations, ladder placement, chimney fire extinguishment and smoke evacuation.

Results

The data collected during this research project looked at many different aspects of training in the fire service in order to set standards and goals in training at Chardon Fire Department. Surveys were done and data was collected from within the department, from other fire departments and from local Chardon Ohio industry. The data collected from other fire departments were from a variety of departments ranging from all volunteer to all full-time. The goal was to research whether training was conducted differently, or if some aspects of fire training are the same.

A combination of both survey data and action data collected during this research project enabled the research questions to be answered and even beyond. The data collected from industry was able to shine some light on training outside the fire service with requirements placed on industry through federal and national standards.

Research Questions

1. Are the firefighters at the Chardon Fire Department getting the proper training?

Answer: Through data on both the history of the department and through a survey done at the department polling firefighters, a clear determination was made on where the department now stands with its current training. Firefighters feel that either not enough training is being done or that the current training is sufficient. The data suggests that the department should not do less training but keep with current training with room for improvement. (see Table 1)

Table 1

Fire Department members were asked to rate the current training at the Department

	<u>Members surveyed</u>	
	<u>N</u>	<u>%</u>
<i>Not enough is being done</i>	<i>11</i>	<i>39.29%</i>
<i>Current training is sufficient</i>	<i>17</i>	<i>60.71%</i>
<i>Not enough training is being done</i>	<i>0</i>	<i>0%</i>
<i>Total</i>	<i>28</i>	<i>100%</i>

2. What training can be done to bring the department into full compliance with the State of Ohio?

Answer: Through researching the *Ohio Administrative Code, Section 4765-11-11*

Firefighter I, it was found that a part time firefighter must be trained at the 120 hour level and through *Section 4765-11-12 Firefighter II*, a full time firefighter must be trained at the 240 hour level. By using these standards it is clear what training must be done by firefighters at Chardon Fire Department in order to meet the Ohio Standards.

3. What type of future training will enhance the fire department's ability to handle all emergencies?

Answer: Even though training is a non-stop process, being prepared to handle all types of emergencies will be a difficult task. Sticking to Ohio and Chardon Fire Department mandatory training will help firefighters enhance their skills. The department members were asked what type of future training they would like to see at the department. A wide range of ideas were listed on the department survey including: tactical and weapons training, officer development, pre-planning, emergency medical training, search and

rescue, apparatus placement, and just about every subject related to the different situations that a firefighter in today's fire service may encounter.

4. What is the proposed realistic plan for bringing all Fire Department members up to minimum State of Ohio standards?

Answer: Through research done during this project, a mandatory training deadline has been set for all firefighters at Chardon Fire Department to meet State of Ohio standards. All current firefighters must have a minimum of 120 hours per the Ohio Firefighter I classification by January 1, 2006. All new hires as of January 1, 2005 shall be trained at the Firefighter II level as part of their one year probationary period.

Through the course of this research project this author was able to set new standards, timelines for the completion, and quality of training.

Members were asked to write down how many years they have been with the Department. Of the twenty eight surveys, ten or 35.71% have been with department between one and five years. Nine or 32.14% have been with department between five and ten years. Four or 14.29% have been on the department between eleven and twenty years. Two members or 7.14% had between twenty and thirty years, and 1 or 3.6% had forty one years on the department. The firefighters who responded had an average of 8.7 years with Chardon Fire Department.

The firefighters at the department were asked on the survey how they received their training at Chardon Fire Department. The choices were "on Thursday nights," which is the designated department training night starting at 1900; "On Shift," which means on duty while working; "At special training events;" or the members were given the choice of circling "I don't train much at all." Of the 28 surveys, 20 or 71.43%, stated they get their training on Thursday nights. Seven of the 28, or 25%, stated they get their training

on duty, and only one, or 3.57%, stated they get their training exclusively at special training events.

Members were asked if they felt the department should have mandatory training. Twenty-three, or 82.14%, felt the department should have mandatory training, and five, or 17.86%, felt mandatory training is not necessary.

The surveys returned from Chardon Fire Department members were generally positive and proved that the members want to either maintain or increase their level of training with the department.

Data collected through a survey sent to 25 other fire departments provided information showing that Chardon Fire Department currently stands about average in frequency and types of training, such as officer and rookie development, and mandatory state and department training as compared to those surveyed. This may have been a result of sending the survey to departments with different types of staffing.

Of the 20 surveys returned, only two departments were all full time, 12 of the departments were combination, made up of either volunteer and part time or part-time and full-time personnel, and six were all-volunteer fire departments.

Of the 20 surveys returned, six departments handled between 100-500 emergency calls, four departments handled between 500-1000 emergency calls, six departments handled between 1000-2000 calls, and four departments handled between 2000-5000 calls.

Portions of the data collected in the survey from other fire departments are outlined in the following tables. Table 2 is broken down according to how the departments were staffed.

Table 2

	N	%
<i>How training is conducted (All full-time departments)</i>		
<i>Daily on duty</i>	<i>1</i>	<i>50%</i>
<i>Weekly on Duty</i>	<i>1</i>	<i>50%</i>
<i>Total</i>	<i>2</i>	<i>100%</i>
<i>How training is conducted (Combination departments)</i>		
<i>Weekly on Duty</i>	<i>1</i>	<i>8.33%</i>
<i>Daily on duty</i>	<i>4</i>	<i>33%</i>
<i>On weekly training nights</i>	<i>1</i>	<i>8.33%</i>
<i>Daily and on weekly training nights</i>	<i>1</i>	<i>8.33%</i>
<i>Daily and at special trainings only</i>	<i>3</i>	<i>25%</i>
<i>Daily, special trainings, and on weekly nights</i>	<i>1</i>	<i>8.33%</i>
<i>Weekly on duty, weekly training nights and special trainings</i>	<i>1</i>	<i>8.33%</i>
<i>Total</i>	<i>12</i>	<i>100%</i>
<i>How training is conducted (Volunteer departments)</i>		
<i>Weekly training nights</i>	<i>6</i>	<i>100%</i>
<i>Total</i>	<i>6</i>	<i>100%</i>

The data compiled in table 3 that were compiled are from the twenty surveys returned from outside Chardon Fire Department and included only the combination departments with reference to whether all firefighters are required to attend training.

Table 3

	N	%
<i>Combination Departments Only</i>		
<i>Are all firefighters required to attend the same trainings?</i>		
<i>Volunteer / part time or part time / full time</i>		
Yes	11	91.66%
No	1	8.33%
<i>Total</i>	<i>12</i>	<i>100%</i>

The data in table 4 were compiled in an attempt get an idea from other fire departments surveyed on exactly what type of training is mandatory at their departments.

Table 4

All departments that returned surveys

<i>Is all or part of training mandatory?</i>	<i>N</i>	<i>%</i>
<i>All training</i>	4	20%
<i>Only certain subjects</i>	8	40%
<i>Only State of Ohio training</i>	2	10%
<i>Only State of Ohio and certain subjects</i>	5	25%
<i>Training is not mandatory but is expected</i>	1	5%
<i>Total</i>	<i>20</i>	<i>100%</i>

The chiefs were asked if members of their fire departments were disciplined in any way if the mandatory training requirements were not met. Thirteen chiefs said the members were disciplined and seven said no.

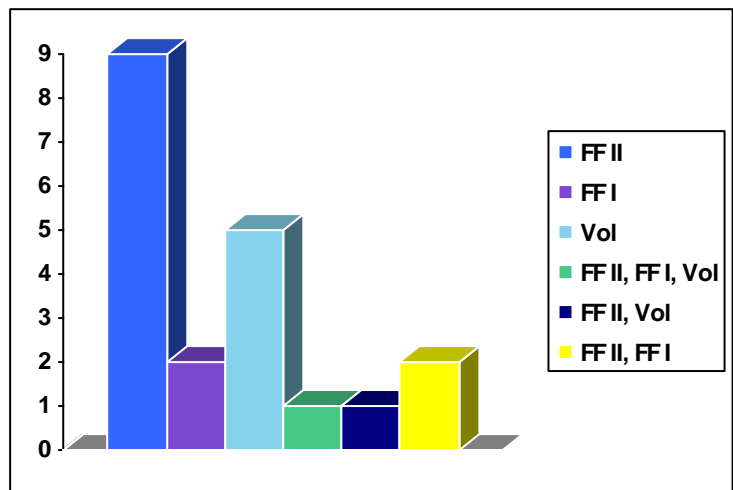
The chiefs were also asked if newly hired firefighters were required to accomplish any type of inter-departmental rookie training prior to completion of their probationary period. Seventeen replied that rookie training is required; two replied that rookie training is not required, and one did not reply at all.

Fire chiefs were asked in the survey at what State of Ohio firefighter level their members are required to be trained at. (See table 5)

Table 5

Ohio Certification Level

<i>FF II (240 Hours)</i>	9
<i>FF I (120 Hours)</i>	2
<i>Volunteer (36 Hours)</i>	5
<i>FF II, FF I, Volunteer</i>	1
<i>FF II, Volunteer</i>	1
<i>FF II, FF I</i>	2



The fire chiefs were asked if their fire officers, meaning assistant chiefs, captains, battalion chiefs or Lieutenants were required to complete any type of officer development training as part of their rank. Twelve responded officers are required and eight responded officers are not required to attend any officer type training.

Of the Chiefs that returned the survey, 15 stated their departments have a designated training officer responsible for scheduling and making sure that training is

conducted. Five responded that their departments do not have a designated training officer.

Of the 20 fire departments, 17 handle emergency medical emergencies as well as fire emergencies. Three stated they do not handle medical emergencies and that portion of emergency response is covered by an outside private ambulance company.

The 17 chiefs that responded that their fire departments handle both fire and emergency medical service (EMS) calls were asked how frequent EMS training is scheduled in comparison to fire training. Four responded that EMS training is conducted more frequently than fire training. Seven responded that EMS training and fire training is conducted about equally on their departments, and 6 responded that EMS training is done less frequently in comparison to fire training.

The third survey that was done included four Chardon Ohio manufacturing facilities in an attempt to look at how industry conducts employee training.

All four facilities polled stated they have new hire training, which included getting familiar with the entire facility, covering such subjects as location of the restrooms, where fire exits and extinguishers are, and where material safety data sheets (MSDS) can be located. MSDS allow any employee to look up and find out information on any hazardous chemical that is used in the plant. Some of the information on the sheets state what to do if an employee comes in contact with the chemical either on their skin, or in their mouth or eyes. The MSDS sheets also contain valuable information for both employees and responding fire department personnel in the event of a fire or spill.

All four training administrators of the facilities stated that their new employees go through job specific training as well, meaning if an employee is going to work in a

department of the facility that is responsible for a certain task in the manufacturing process, then the new employee will be also be trained in that task.

Three of the administrators polled stated that they follow guidelines for training and quality in production and safety through the Insurance Services Office (ISO) standard Q9001. Part of this standard is the process approach which is used to ensure the facility produces a quality product. When used in a quality management system, such an approach emphasizes the importance of understanding and meeting requirements, the need to consider processes in terms of added value, obtaining results of process performance and effectiveness, and continual improvement of process based on objective measurement.

All four training administrators stated employee training is done both in the plant and on the outside by special training companies which specialize in certain subjects such as OSHA training, or Workman's Compensation injury prevention training.

All four of the training administrators stated their employees are taught the Occupational Safety and Health Administration's (OSHA) lock out tag out safety system. This system is primarily used for confined space entry, where two or more people have use of separate locking tags in order to keep entry doors open when one or more employees are in the confined space. Employees are also taught other OSHA requirement such as fall prevention, hazardous materials, and lifting and hoisting.

All four training administrators stated training is mandatory for all employees. The job specific training is only mandatory for employees performing that job.

The rubber company and the company that produces the fiberglass tanks stated additional training may be asked of an employee based on their job performance. The fiberglass tank company stated that they give their employees a written test to see if they

learned anything during the training process. If the employee fails the test, then they are required to go through additional training.

Researching how manufactures conduct both job specific and mandatory training was a great experience for this author. The fire service is not the only segment of the private or public sector that has a lot of training to conduct. This author found that almost all training done by manufacturing facilities is done for safety reasons, much like the reasons for training in the fire service.

Discussion

Since the beginning of this research project over a year ago, many positive things have happened at the Chardon Fire Department in the training of firefighters. This change has been accepted very well among the ranks. Many firefighters have stated that they like the change. During the transition of the department from a volunteer fire department to a combination department, it was felt by the author there would be many growing pains. There have been some, but the majority of members have realized the need for the change. In the survey given to the members of the department, no one who returned the survey stated that they felt the department did too much training. The author of this paper is also the chief of the department and was able to make changes almost immediately. The ideas for changes in training were brought to the attention of the assistant chief and the captain, who is in charge of training, before they were implemented.

Following the Ohio Administrative Code for the different levels of firefighter training as outlined in the literature and review of this paper, the author was able to establish benchmarks and time lines for the accomplishment of the different levels of training. These new requirements will set the standard for all current and future members of the department.

In the article, *No place in the fire service for lifelong learning shortcuts*. (Coleman, Ronny J., July 2002, *Fire Chief Magazine* pg. 20-22) writes, “The more important question to be asked is this: How much training does it take to keep a firefighter competent? How much time are you devoting to training within, and is it giving you results?” This question will not be able to be answered by the author for Mr. Colman through the training program of Chardon Fire Department. Mandatory training as well as required training in order to be hired will help keep firefighters competent versus doing little or no training that will make firefighters feel incompetent when basics skills are needed at the scene of an actual emergency.

In reviewing the literature and review, the results of the surveys and the interviews with the safety managers at the Chardon-area manufacturing plants, the author can establish that there is a need to develop a well organized training program that encompasses both officer development and firefighter training.

From the literature and review *Jenaway* writes, “As the frequency of large fires has reduced, the increase of hazardous materials, terrorism, EMS, technical rescue and related new hostile environments requires new tools, techniques and training. Education must be geared to these changes and driven by risk assessments and pre-emergency planning.” The author of this paper agrees with Mr. Jenaway. To establish or enhance the training program at Chardon Fire Department the program needs to encompass all of these subjects that have become the duty of the fire service. The days of the fire department putting out only fires are long, long gone.

The study results through the survey of other departments that have a combination type staffing similar to Chardon Fire Department did not help much in deciding when to conduct, and what training should be mandatory. The combination departments did their

training on duty daily, on duty weekly, weekly training nights, at special trainings, or only what was mandated by the state.

The implications of the results of this research project are that Chardon Fire Department as well as any fire department must train. The training must be done by all members, whether they are volunteer, part time, or full time. It is up to us as firefighters to want to keep our skills sharp. It is also up to us, as administrators, to insist firefighters continue to train so our skills remain sharp. It is also our responsibility to not only train with new concept in fire fighting in mind, but to also change periodically the style of training so that fire fighters don't get bored with the same old thing, causing them to lose interest in keeping their skills sharp. Due to the fact the combination departments surveyed were not able to give a clear picture as to when training should be conducted, the author of this paper has come to the conclusion of "just do it." Do what is mandated by the state, do what is mandated by the department, and do it in an attempt to keep skills sharp, the firefighter safe from injury, and project a positive image into the community.

Recommendations

The research presented in this study has demonstrated the need for Chardon Fire Department as well as all fire departments to take a proactive approach in the development of a firefighter-training program. In addition to the development of this program the fire department shall create pride not only within the department, but in the communities it serves as well as with local political leaders

The problem stated at the beginning of this project was to address and evaluate the current firefighter training program at the Chardon Fire Department. The study also was to investigate what changes may be needed in order to establish a more proficient

training program which is conducive to the overall job performance of firefighters at all types of emergencies. The areas examined were the past, present and possible future learning practices, and how much training would be need to be done.

The author has learned through this research project there is some firefighter training that is not an option of whether to accomplish or not. Some of these trainings include those that are mandated by the state or federal government, and those that will keep up the skill of the firefighters while working at emergencies.

Recommendations include:

1. Obtain internal support from officers and firefighters in the department and get them to buy into the fact that training is a necessary task that must be accomplished in order to keep skills up, injuries down, and pride within the department when it comes to accomplishing favorable results at emergencies. This may be difficult for some firefighters who volunteer or only work on a limited part time basis. These type of members need to realize that the scene of a fire or emergency is not the place to be learning how to operate equipment or how to properly save someone's life.
2. Research what type of training needs to be done in your country or state in order to meet mandatory requirement, or in your local area concerning specialized type fire fighting that may be present with different types of industry.
3. Establish mandatory training within your department and stick to it. Not only should certain types of training be mandatory, but the number of hours a fire fighter trains as well. If a firefighter does not accomplish mandatory training then some type of penalty should be incurred. This penalty may be not allowing the firefighter to work, or assigning the firefighter to a senior member in order to get the task accomplished.

4. Try to stay up with the advancements in the fire service. Advancements are discovered usually by someone being hurt or killed. Advancements are usually made to make our jobs as firefighters easier and safer.
5. Keep firefighters interested in training and the department. Training from year to year may need to be changed in order to learn new things or how to do old things differently. The same old training month after month, year after year will turn firefighters off to training and eventually off to the department.

The final recommendation for the future is Chardon Fire Department should stick with the benchmarks that have been established through the action research of the project.

The standard that all new hires regardless of hours worked, become State of Ohio Firefighter II (240 hour) trained should also be expanded to include all those on the department that were not required to do so at the time of their hiring.

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Management Systems Requirements

Appendix A

Survey for Ohio Fire Executive Research Project

Improving the Training at the Chardon Fire Department

Chief Larry L. Gaspar

Please complete the survey below by January 31, 2005.

Upon completion of the survey, please return to Chief Gaspar

1. How would you rate the current training at the Chardon Fire Department

(circle one) Not enough is being done Current training is sufficient

Too much training is being done

2. How do you get most of your training at the CFD

(circle one) On Thursday nights On shift

At special training nights I don't train much at all

3. How many years have you been on the Department _____

4. Do you feel the Department should have mandatory departmental training.

(circle one) Yes No

5. What type of future training would you like to see in order to bring the Department more in line with State and Federal training regulation

Appendix B

Chief Larry L. Gaspar

Chardon Fire Department

OFE Class 4, Research Survey

1. Is your Fire Department staffed by
 - a. Full-time
 - b. Part-time
 - c. Combination
 - d. Volunteer

2. How many emergency calls does your Department handle annually?
 - a. 100 – 500
 - b. 500 – 1000
 - c. 1000 – 2000
 - d. 2000 – 5000
 - e. 5000 +

3. Are trainings conducted
 - a. Daily on duty
 - b. Weekly on duty
 - c. Weekly (Training Nights)
 - d. At special trainings
 - e. Only when needed

4. If your Department is a combination department, volunteer / part-time, or part-time / full-time, are all members required to attend the same trainings?
 - a. Yes
 - b. No

Appendix B Continued

- 5 Does your Department have mandatory trainings for
 - a. All training
 - b. Certain subjects
 - c. State required training
 - d. Training is not required, but is expected

- 6 Are members of your Department disciplined in any way if mandatory training is not met.
 - a. Yes
 - b. No

- 7 Are newly hired members required to fulfill inter-departmental rookie training prior to completion of their probationary period.
 - a. Yes
 - b. No

- 8 At what State of Ohio level are your firefighters required to be trained.
 - a. 40 hour
 - b. 120 hour
 - c. 240 hour

9. Are your officers required to complete any type of officer development training?
 - a. Yes
 - b. No

- 10 Does your Department have a designated training officer?
 - a. Yes
 - b. No

Appendix B Continued

11. Does your Department handle EMS, as well as Fire?
 - a. Yes
 - b. No

12. If your Department handles EMS, are EMS trainings scheduled
 - a. More frequently than Fire training
 - b. About the same as fire training
 - c. Less than fire training
 - d. All EMS training is done outside the Department

Appendix C

OFE Survey for
Chardon Area Industry
L. Gaspar, Chardon Fire Department

Name of Company _____

What type of training do new hires go through, is it job specific?

Is their continuing education or training that is conducted on regular basis?

Are there set standards i.e. OSHA, Ohio revised code, or others that have to be learned or followed?

Is training done in house or do employees take classes outside the Company or both?

Is training mandatory especially for long time employees?
