

**DEVELOPMENT OF NFPA 1500, *STANDARD ON FIRE DEPARTMENT
OCCUPATIONAL SAFETY AND HEALTH PROGRAM*, 1997 EDITION, COMPLIANCE
PLAN FOR THE CLEARCREEK FIRE DISTRICT**

EXECUTIVE PLANNING

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An applied research project submitted to the National Fire Academy
as part of the Executive Fire Officer Program

March 2002

ABSTRACT

The problem this applied research project addressed is the absence of a plan addressing NFPA 1500 compliance for the Clearcreek Fire District.

The purpose of this applied research project was to develop a plan addressing NFPA 1500 compliance for the Clearcreek Fire District.

The evaluative / action research methodology was utilized to answer the following research questions:

1. What are the minimum requirements necessary for NFPA 1500 compliance?
2. Is there a logical or standardized method for developing an NFPA 1500 compliance plan?
3. Does the Clearcreek Fire District currently meet any of the compliance requirements identified in NFPA 1500?
4. What are the current non compliance areas of NFPA 1500 for the Clearcreek Fire District?
5. What specific steps or actions are necessary in order to implement a NFPA 1500 Compliance Plan for the Clearcreek Fire District?

The procedures used included a literature search, review, formation of a project team, performance audit and development of a Position Description Essential Job Function for a Captain of Training and Safety Services to function as the fire department safety officer.

The following recommendations were endorsed after an analysis of the data and information derived from the research:

1. The Clearcreek Fire District should select and hire a Captain of Training and Safety Services. This individual will function as the fire department safety officer and will

oversee and manage the NFPA 1500 compliance program for the Clearcreek Fire District.

2. The Clearcreek Fire District should implement the 57 NFPA 1500 Compliance Recommendations identified in Appendix E.
3. Clearcreek Fire District should review the performance audit contained in Appendix C, against the newly revised NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program*, 2002 edition once the document becomes available.

The effect of these recommendations, when implemented, will permit the Clearcreek Fire District to achieve NFPA 1500 compliance and ultimately improve the health and safety of firefighters working at the Clearcreek Fire District, as well as the services provided by these firefighters to the community.

Research to improve fire department operations and safety requires a continuous evaluation of that department's operations. All fire departments should review their operating procedures, guidelines, and practices in order to objectively consider adopting safety guidelines that will best work for them based upon available resources and nationally recommended practices.

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INTRODUCTION

Firefighting continues to be an extremely dangerous occupation. Recent nationally publicized firefighter tragedies such as the June 17, 2001 fire that resulted in the death of three New York City firefighters, the Worcester, Massachusetts incident on December 3, 1999, that resulted in the deaths of six firefighters, and the Keokuk, Iowa incident on December 23, 1999, that claimed the lives of three additional firefighters serve as bold reminders of the inherent dangers of our profession. However, over the past decade, efforts to minimize these dangers through the implementation of comprehensive occupational safety standards and regulations, designed to provide a safer working environment for firefighters, remain hot topics of discussion and debate throughout the fire service community.

The problem this applied research project will address is the absence of a plan addressing NFPA 1500 compliance for the Clearcreek Fire District.

The purpose of this applied research project is to develop a plan to addressing NFPA 1500 compliance for the Clearcreek Fire District.

The evaluative / action research methodology was utilized to answer the following research questions:

1. What are the minimum requirements necessary for NFPA 1500 compliance?
2. Is there a logical or standardized method for developing an NFPA 1500 compliance plan?
3. Does the Clearcreek Fire District currently meet any of the compliance requirements identified in NFPA 1500?

4. What are the current non compliance areas of NFPA 1500 for the Clearcreek Fire District?
5. What specific steps or actions are necessary in order to implement a NFPA 1500 compliance plan for the Clearcreek Fire District?

BACKGROUND AND SIGNIFICANCE

Interior structure firefighting continues to present firefighters with both known and hidden dangers. According to the annual report *Firefighter Fatalities in the United States in 1998* (IOCAD Emergency Services Group, 1999), there is an overall continuing long term-trend (1988 through 1998), of declining firefighter fatalities and injuries. It is widely accepted throughout the fire service that this trend may be attributed to the growing awareness that the vast majority of firefighter deaths do not have to occur, in spite of the very real, inherent dangers of the profession. In general, over the past thirteen years, the fire service has made tremendous progress in reducing firefighter fatalities and injuries through improvements in areas such as technology, procedures, and behavioral approaches. Specific examples of these include improvements in personal protective clothing and equipment, Personal Alert Safety Systems (PASS) devices, better overall training for firefighters, the advent of widely used incident management systems and firefighter accountability systems, improvements in standard operating procedures, and the institution of rapid intervention teams into emergency operations in an effort to provide immediate rescue and assistance for firefighters injured, trapped, or lost, as well as providing a greater emphasis on firefighter health and fitness.

Unfortunately, the analysis of firefighter deaths in *Firefighter Fatalities in the United States in 1999* (IOCAD Emergency Services Group, 1999, p. 45) reports that the overall long-term trend toward fewer firefighter fatalities suffered a step backward during 1999 with an increased number of fatalities.

The Clearcreek Fire District

The Clearcreek Fire District is a combination fire department providing fire protection and emergency medical service for the City of Springboro and Clearcreek Township, covering a forty-seven square mile area with only one fire station that is not centrally located. The community consists of approximately 520 commercial and approximately 7,332 residential properties, as well as an estimated 14,000 Springboro and estimated 10,000 Clearcreek Township citizens and still growing. The City of Springboro is located within the Northern part of the Clearcreek Township boundaries. Clearcreek Township is located in Central Northern Warren County, twenty minutes South of Dayton, Ohio, forty minutes north of Cincinnati, Ohio, and bordering Montgomery County to the North. The community is one of the fastest growing areas in the state of Ohio.

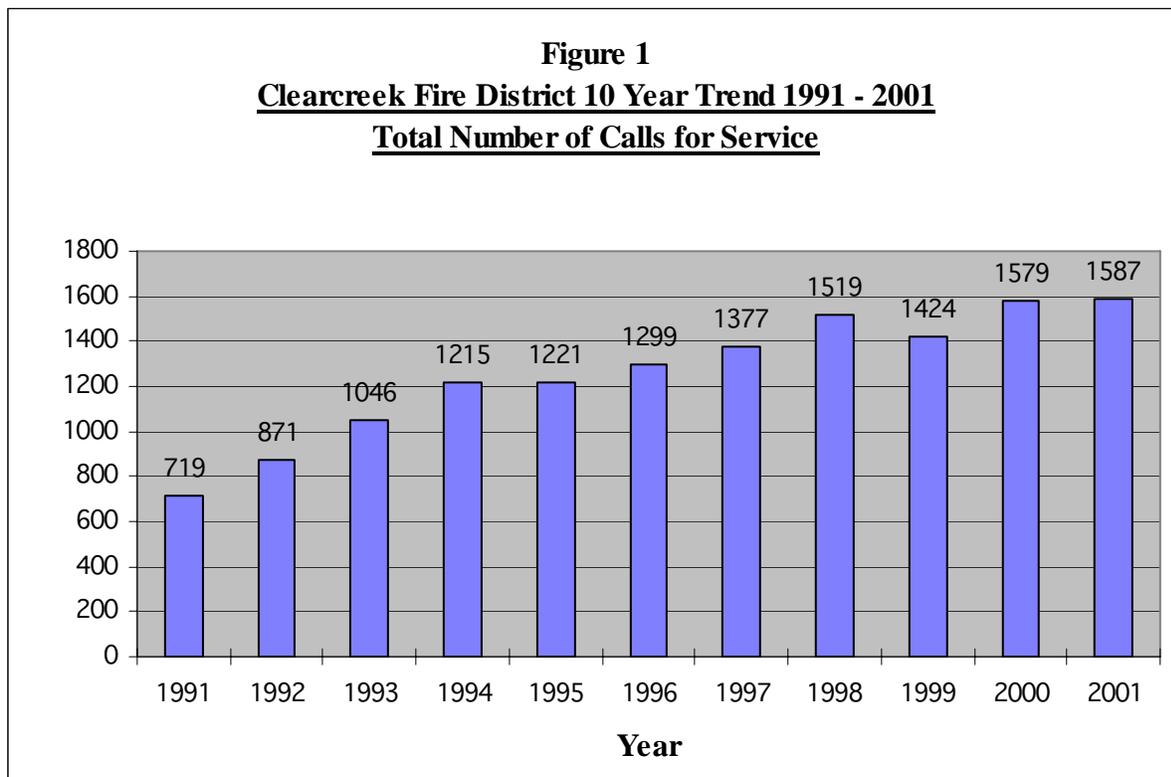
The Clearcreek Fire District operates two class "A" fire engines, one 100 ft Quint type Aerial Ladder, three medic units (two front line and one back-up unit), one brush unit, and one heavy rescue truck.

The Clearcreek Fire District, is a combination fire and emergency medical service department with an authorized strength of ninety-six. All career personnel are required to be Ohio certified firefighter / paramedics and all part-time personnel are strongly encouraged to be Ohio certified firefighter / basic emergency medical technicians as a minimum. At the present

time, service is provided to the community utilizing twelve career firefighter/paramedics and thirty-five part-time / paid-on-call personnel operating out of a single fire station. Nine are career Firefighter /Paramedics on a 24 / 48 shift), one career Bureau Chief, one career Assistant Chief, and one is Chief of Department on days (40 hour work week).

The station is staffed with three career firefighter / paramedics and two part-time personnel twenty-four hours per day seven days per week. Monday through Friday 06:00 hrs. to 18:00 hrs. From 18:00 hrs. to 06:00 hrs. and on Saturday and Sunday the station is staffed with three career firefighter / paramedic and two part-time personnel.

The Clearcreek Fire District responded to 1,587 requests for service during 2001. Figure 1 shows a ten year trend from 1990 to 2000 of steadily increasing call for service volume within the response district.



The City of Springboro, where a majority of our runs are, estimates that the city will grow to an estimated 20,000 people within the next 10 to 15 years. The City of Springboro is primarily a residential community with a limited industrial base. The Township of Clearcreek is a scenic rural setting separated by fields and an occasional planned unit development (PUD).

The Fire District utilizes a property tax base. Our last levy passed in May 2001 was for 3.85 mils and generates \$2,354,792.00. This levy is coupled with a (1987), 2.5 mil levy and (1981), 1 mil levy which produce \$1,056,000. These three levies are continuous. The Fire District also participates in third party EMS billing which generates an additional \$ 180,000.00 annually. With the current tax base and utilizing EMS billing, the Clearcreek Fire District generates total annual operating revenue of approximately \$3,585,000.00. The Insurance Service Organization (I.S.O.) Protection Class is a 6 / 9.

Over the past fourteen years, the Clearcreek Fire District has made many improvements aimed at improving service delivery and the safety of its firefighters. Some of these include the on-going purchases of state of the art personal protective clothing , apparatus, and equipment, providing better overall training for firefighters, formally adopting and routinely using an Incident Management System and participating in a regionalized Firefighter Accountability System.

In March, 1997, the Fire District's Leadership Team developed a Strategic Plan for the Clearcreek Fire District. The 1997 - 1998 Strategic Plan was the beginning of our efforts to maximize the resources and services provided by the department through important and worthwhile goals, objectives, and programs. Our foremost goal of the Clearcreek Fire District is to safely provide the best quality emergency service possible. This declaration is embodied in our mission statement, which reads:

“The mission of the Clearcreek Fire District is to provide customer oriented health, safety, fire and emergency services with professionally trained personnel in an efficient and cost effective manner utilizing resources provided by the community.”

Out of the strategic plan came numerous goals and objectives. The following are some of the most important goals and objectives that have been accomplished to date: a review and implementation of new policies regarding 24 hour per day, in-station staffing , personnel level of training, (quantity and quality), and the updating of General Operating Guidelines and Response Policies. These have been completed and implemented, however, improvements and revisions are dynamic and are on-going.

Even with all of the progress made, the Clearcreek Fire District, like many other combination fire departments, is still struggling with issues which are directly related to the rapid growth of the community, the changing community demographics, and an increase in call volume, all of which impact the ability to effectively answer the increased demand for services.

In order to better prepare for the future, during October 2000 the Clearcreek Fire District completed a formal Strategic Analysis and Proposed Master Plan for the next five to ten years. MMA Consulting Group, Inc. of Boston Massachusetts was the firm that conducted the strategic analysis and proposed master plan for the Clearcreek Fire District. The principal MMA Fire / Rescue Services consultant was Dr. John A. Granito. Dr. Granito is an industry expert in the field of planning public fire protection and has worked with numerous fire departments, chairs a key NFPA policy committee, and is well known for his work on the future of the fire service.

This plan (MMA Consulting Group, 2000) contains a number of recommendations which are now in the process of being implemented as identified in Figure 2 and Figure 3.

Figure 2

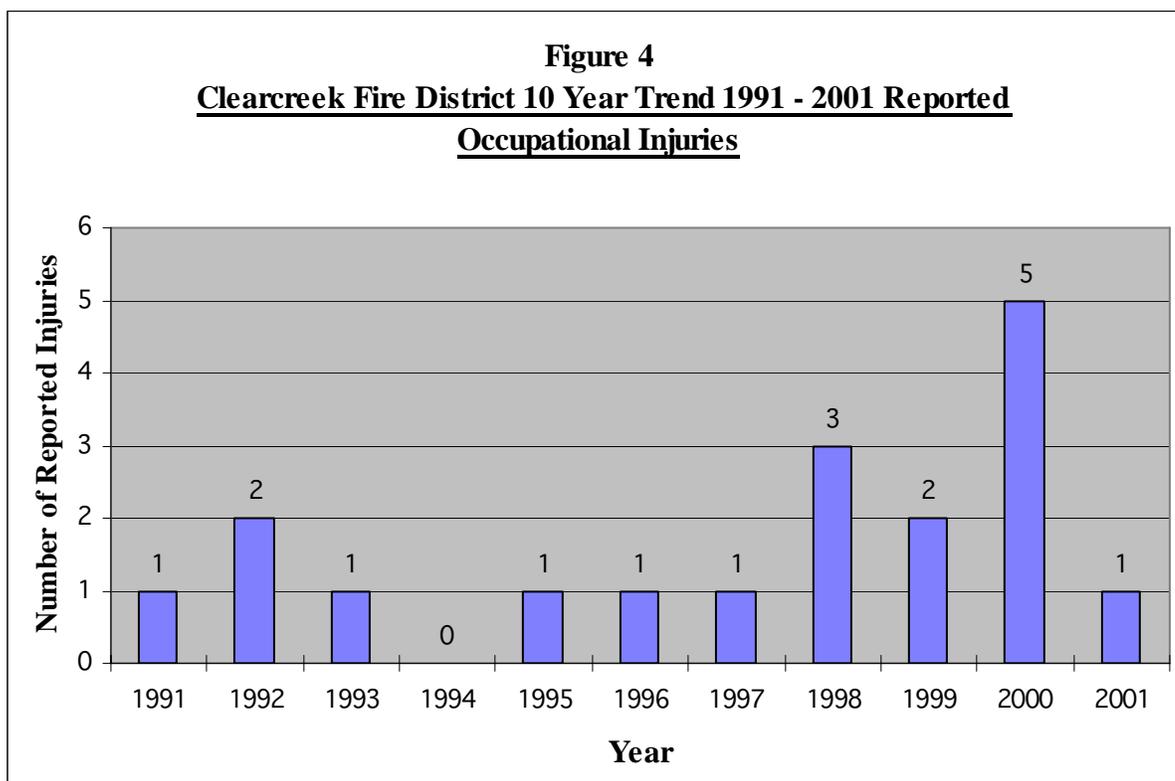
 Timeline To Implement Capital Improvements and Hire Needed Personnel 	
First Year 2002	Second Year 2003
Build Temporary Station (\$75,000.00)	Construct Station 23 (South) (\$500,000.00)
Hire 8 New Full Time (\$400,000.00 + Benefits per year)	Hire 3 New Full Time (\$140,000.00 + Benefits per year)
Purchase Quint (Ladder Truck) (\$600,000.00)	Purchase Medic (\$150,000.00)
Update Breathing Systems (\$150,000.00)	Purchase (2) Staff Vehicles (\$48,000.00)
Update Electronic Equipment (\$30,000.00)	
Purchase (2) Staff Vehicles (\$48,000.00)	

Figure 3

 Timeline To Implement Capital Improvements and Hire Needed Personnel 		
Third Year 2004	Fourth Year 2005	Fifth Year 2006
Construct Station 22 (North) (\$500,000.00)		Hire 1 New Full Time (\$52,000.00 + Benefits per year)
Move into Permanent Station 22		
Hire 3 New Full Time (\$146,016.00 + Benefits per year)		
Purchase Engine (\$256,000.00)		

In addition to these recommendations the *Clearcreek Fire District Strategic Analysis and Proposed Master Plan* (MMA Consulting Group, 2000) indicated that the Clearcreek Fire District should “Develop an NFPA #1500 Standard Compliance Plan” (p. 42).

The Clearcreek Fire District has been fortunate in posting relatively few firefighter injuries and no firefighter deaths during the course of its operation over the past ten years as illustrated in Figure 4.



The administration of the department has worked diligently to build safety into the District's General Operating Guidelines (GOGL's) throughout the years but recognizes that more can be done to help ensure employee safety. The development of a formalized NFPA 1500 Standard compliance plan will help reduce the chances that the Clearcreek Fire District's outstanding safety record will be blemished by a mishap.

The research problem presented herein relates to material covered in Strategic Planning, Module 4 of instruction in the Executive Planning Course at the National Fire Academy. It specifically relates to the Planning to Plan, Performance Audit, and Gap Analysis portions that were presented as a part of the Applied Strategic Planning Process. The project further relates to

the course in that implementation of the resulting recommendations may improve the health and safety of Clearcreek Fire District firefighters and ultimate service delivery to the citizens of the community.

LITERATURE REVIEW

Research Question 1.

The National Fire Protection Association (NFPA) 1500 *Standard on Fire Department Occupational Safety and Health Program* is the most often used national consensus standard for fire department operations. In general terms consensus standards such as NFPA 1500 are considered to contain credible recommended practices and procedures but are usually not mandated requirements for a fire department, unless formally adopted by the authority having jurisdiction. NFPA 1500 was written by a technical committee of individuals representing various interests from a wide spectrum of the fire service. This committee consisted of individuals such as fire chiefs, company officers, firefighters, the United States Fire Administration, union representatives, volunteer representatives, and representatives from various fire service equipment manufacturers, and other independent experts. The original version of NFPA 1500 which became effective August 7, 1987 has been revised several times. The most current version of the standard is the NFPA 1500, 1997 Edition which became effective on August 15, 1997.

In generalized terms, this standard provides guidelines for establishing, implementing, and managing a comprehensive safety and health program (NFPA 1500, 1997). The standard is broken down into ten individual chapters and 328 individual sections. Among the basic requirements outlined in the standard are the following items: develop a risk management plan

and an occupation safety and health policy; appoint a fire department safety officer; establish an occupational safety health committee; maintain records on all job-related incidents; train all fire department members to perform their assigned duties safely; properly specify, maintain, and repair all vehicles, and train drivers and passengers; use and maintain protective clothing and equipment appropriate to each member's duties; apply an incident management system for emergency operations, including risk management systems and accountability systems; ensure that facilities comply with all applicable health, safety, building and fire codes; medically evaluate and certify members; and provide a member assistance program (NFPA 1500, 1997).

Section 2-5.1 of NFPA 1500 is of particular importance in that, “The Fire Chief shall appoint a designated fire department health and safety officer. This position shall comply with the requirements of NFPA 1521, *Standard for Fire Department Safety Officer*” (NFPA 1500, 1997 p.9). Section 2-5.2 of NFPA emphasizes the importance of the fire department safety officer stating “The fire department safety officer shall be responsible for the management of the occupational safety and health program.” (NFPA 1500, 1997 p.9).

Among the duties of the fire department safety officer as identified by NFPA 1521, *Standard for Fire Department Safety Officer*, 1997 include the following: ensuring that OSHA record-keeping and reporting requirements are met; preparing safety policies and ensuring they are followed; monitoring activities/incidents where accidents involving department members could occur; establishing and monitoring programs for detecting and correcting hazardous conditions; reviewing and approving safety features of apparatus, equipment, clothing, etc.; conducting safety training for the department; investigating all accidents and incidents involving death or injury to department members; keeping informed of health and safety issues (NFPA 1521, 1997).

At the November 14, 2001 National Fire Protection Association Technical Report committee meeting, a revised version of NFPA 1500 was accepted by the membership and no appeals were received (NFPA News, 2002). The newly revised NFPA 1500 standard will be available on April 30, 2002 and includes some new guidelines including: a new section on fire department respiratory protection programs in Chapter 7; inclusion of risk management concepts for emergency incident scene operations; new information on roles and responsibilities of the fire department health and safety officer; updated references for protective clothing and equipment that match referenced NFPA standards (NFPA News, 2002).

Research Question 2.

Vincent Dunn, a retired Deputy Chief from the New York City Fire Department and well known fire service educator, approaches firefighter safety through a simple question, “Is Your Fire Department Safe?” (Dunn, 1992 p.365). Dunn offers a yes or no answer questionnaire concerning ten important safety and health recommendations set forth by NFPA 1500 (See Appendix A). Dunn alludes that these ten basic questions provide a good and simple place to start when examining safety issues within a fire department.

The International Fire Service Training Association (1992), identifies that the appointment of a fire department safety officer is the first step when implementing an occupational safety and health program for a fire department. The International Fire Service Training Association (1992) emphasizes its importance in the following statement “This appointment should be given careful consideration because the safety officer will greatly influence the success of the program” (p.17). The relationship of a fire department safety officer as it pertains to the training of personnel was emphasized by Loflin (1989) in his statement that “A thorough training program ensures that members are able to perform their duties in a safe

manner” (p.17).

William Peterson (1997) indicates that “While it may be true that individual elements of an NFPA compliance plan may vary from fire department to fire department, the process that each department goes through during the plans development will be fairly standard” (p.10-68). Peterson (1997) goes on to itemize a suggested methodology consisting of 17 Steps. These steps are listed in Appendix B. Peterson’s first six steps concern a thorough review of both NFPA 1500, and existing departmental procedures to evaluate the department’s level of compliance and deficiencies. Peterson (1997) also indicates that “the methodology may, and should be, modified as needed on an individual basis” (p.10-68). Roche and Teele (1993), suggest a nearly identical methodology.

Research Questions 3, 4, & 5.

Research conducted by Terry Jackson (1998), used an evaluative methodology through a comparison of existing practices in the Marion Fire Department to the NFPA 1500 (1992) standard. Additionally, research conducted by Scott Kerwood (1998) utilized a similar needs analysis methodology, and was further expanded upon in the implementation phase of NFPA 1500 Compliance described by Scott Kerwood (1999).

Jackson (1998) noted that the “research project was very successful as a guidance tool for the department to use as it works through what appears to be an intimidating project” (p. 18).

In the article “Coping with NFPA 1500” (Walsh, M.B. & Wojcik, K, 1990) several examples are provided that highlight logical step by step progressions to the end goal. Larger fire departments, typically have implementation plans that use goal-dates for implementation of

the plan, while smaller departments typically use some form of an incremental plan. Research conducted by Jackson (1998) resulted in the creation of a phase in plan for implementation.

Summary Statements Influencing Project.

Both the National Fire Protection Association *Standard on Fire Department Occupational Safety and Health Program*, 1997 (NFPA, 1997) and the National Fire Protection Association (NFPA), *Fire Protection Handbook Eighteenth Edition* chapter entitled Fire Department Occupational Safety and Health (Peterson, 1997) influenced this research effort greatly. Both of these documents provided the framework for the drafting of a compliance plan for the Clearcreek Fire District. Additionally, research conducted by Jackson (1998) and Kerwood (1998) also provided valuable insights. In summation, it was interesting to find that nearly all of the aforementioned authors suggested the same basic steps to reach the goal of NFPA 1500 compliance.

PROCEDURES

Definition of Terms

The following definitions are important terms used in this Applied Research Project.

NFPA 1500 - National Fire Protection Association *Standard on Fire Department Occupational Safety and Health Program*, 1997.

NFPA 1521 – National Fire Protection Association *Standard on Fire Department Safety Officer*, 1997.

Research Methodology

The evaluative / action research methodology was utilized. The procedures used included a literature search and review, formation of and use of a project team, a performance

audit of current Clearcreek Fire District practices, and development of a Position Description / Essential Job Function for a Captain of Training and Safety Services to serve as the fire department safety officer.

A review of current literature was conducted. The initial efforts to locate and compile appropriate information and material were conducted at the Learning Resource Center at the National Emergency Training Center in Emmitsburg, Maryland, in August of 2001. An on going search for additional current appropriate literature on this topic continued from September 2001 through February 2002. Literature reviewed included reference books, professional journals, periodicals, and other Executive Fire Officer research projects.

A project team was formed consisting of the author, the Chief of Department, the Assistant Chief of Emergency and Support Services, and a Career Firefighter / Paramedic.

Information obtained through the literature review was examined and reviewed by the project team. The project team identified that the first six of Peterson's (1997), steps will provide the foundation for ultimate development and implementation of an NFPA 1500 compliance plan.

A performance audit (see Appendix C), was completed of current Clearcreek Fire District practices.

It was the consensus of the project team that due to the complexity, scope, and potential long term significance of the results of this project that establishing a fire department safety officer should be an early step in the process and would be a prudent portion of the methodology. Therefore, in addition to completing the initial performance audit, a Position Description / Essential Job Function for Captain of Training and Safety Services was developed according to NFPA 1521, *Standard for Fire Department Safety Officer* 1997 requirements (see Appendix D).

From the results of the performance audit, the project team developed a list of 57 NFPA 1500 Compliance Recommendations for the Clearcreek Fire District (see Appendix E).

Assumptions and Limitations

Due to the complexity of both NFPA 1500 and the associated components of a health and safety program, heavy reliance on personal observations and experience within the workplace of the Clearcreek Fire District was required. It was assumed that the project team members completing the NFPA 1500 performance audit worksheet were familiar with the NFPA 1500 requirements and the existing General Operating Guidelines and equipment resources of the Clearcreek Fire District. Although the NFPA 1500 performance audit worksheet forces certain categories of responses, it is still open ended to a degree leaving room for interpretation as to whether or not there is compliance in certain areas.

Several limitations were noted during the course of this research project. It was assumed that the individuals completing the performance audit worksheet were providing truthful, unbiased information, and had sufficient knowledge to accurately complete the worksheet.

RESULTS

Answers to Research Questions

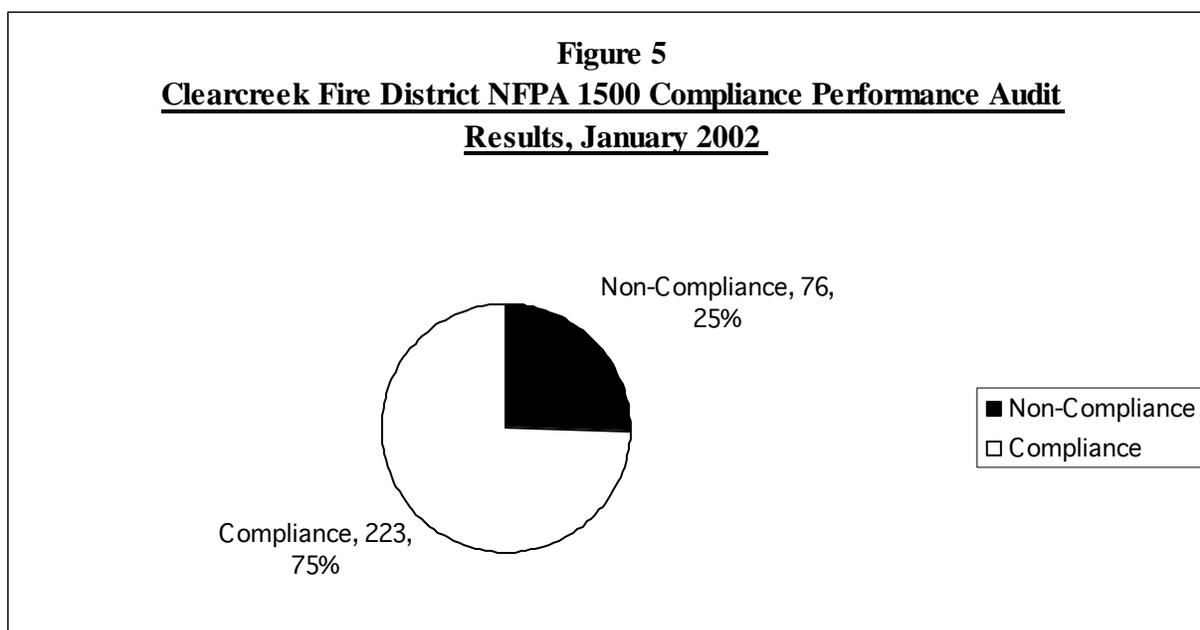
Research Question 1. NFPA 1500 consists of ten chapters and 328 specific sections for a fire department to analyze against its own safety and health program. Of this number, only 301 sections are applicable to the Clearcreek Fire District. The literature review reflects the major categories covered by the standard. A sample local performance audit (Appendix C), based on

the NFPA 1500, 1997 standard compliance worksheet was developed to allow a review of Clearcreek Fire District present compliance levels.

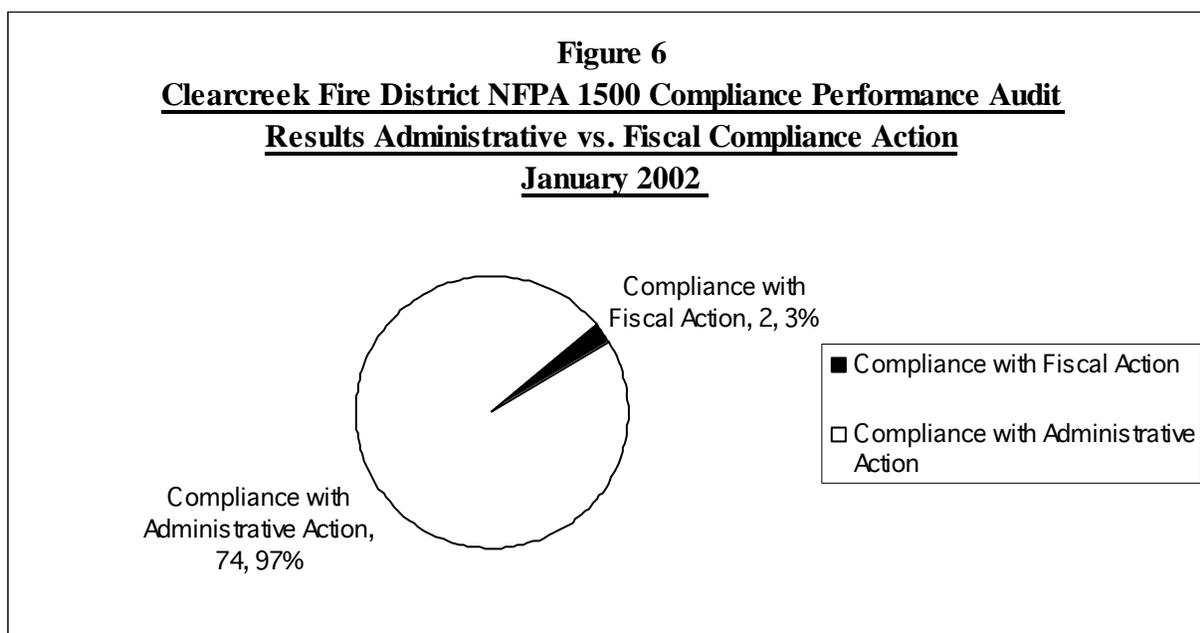
The standard also requires appointment of a Fire Department Safety Officer and the formation of a Safety Committee to monitor, review, and update the plan on an ongoing and regular basis.

Research Question 2. Literature reviewed indicated that Peterson's Seventeen Steps for Implementing NFPA 1500 represents one of the most commonly utilized methodologies for developing a NFPA 1500 compliance plan. The Seventeen Steps as identified by Peterson (1997), are listed in Appendix B. Research conducted by Jackson (1998), Kerwood (1998), and Kerwood (1999) utilized this basic methodology.

Research Question 3. There are a total of 301 sections of NFPA 1500 which are applicable to the Clearcreek Fire District. Figure 5 shows that at the present time the Clearcreek Fire District meets compliance with 224 of the 301 applicable sections or 75 % of the standard.



Research Question 4. There are a total of 76 applicable sections of NFPA 1500 with which the Clearcreek Fire District is presently not in compliance. Of these 76 there are 74 sections (97%) that require only administrative actions, such as developing Standard Operating Procedures, setting guidelines, or making personnel appointments and job assignments. There are 2 sections (3%) that require fiscal action involving the purchase of necessary equipment items. This is illustrated in Figure 6.



Research Question 5. Literature reviewed indicates that the appointment / hiring of a Fire Department Safety Officer is paramount in implementing, achieving, and maintaining NFPA 1500 Compliance. A Position Description / Essential Job Function for Captain of Training and Safety Services was developed from information provided in NFPA 1521 *Standard on Fire Department Safety Officer* (NFPA 1521, 1997). The final draft of this is located in Appendix D.

The Performance Audit identified a total of 76 areas of non-compliance. A list of 57 NFPA 1500 Compliance Recommendations is found in Appendix E. These 57 items represent specific areas that the Clearcreek Fire District must address or complete in order to achieve NFPA 1500 compliance.

As a direct result of this applied research project a Position Description / Essential Job Function for a Captain of Training and Safety Services was developed (Appendix D).

DISCUSSION

The environment in which firefighters work has a significant level of risk for injury or death. These risks can be minimized through the implementation of a formalized occupational safety plan addressing the proper training of personnel, implementation of appropriate strategies and tactics, and the avoidance of unnecessary risks.

According to *Firefighter Fatalities in the United States in 1999* (IOCAD Emergency Services Group, 2000), the analysis of firefighter deaths in 1999 indicates that the number of firefighter fatalities increased significantly. According to this report stress-induced heart attacks remained a top cause of firefighter deaths. This report also emphasized the need for continued focus on firefighter health and wellness, basic health maintenance, physical fitness, periodic medical exams, the use of seatbelts, emergency vehicle operator training, PASS devices, SCBA's, and other protective clothing and equipment items for future efforts to reduce firefighter injury and loss of life. It is important to note that each of the aforementioned items are targeted in NFPA 1500 compliance.

Dunn (1992), states that “There are no new lessons to be learned from a firefighter’s death or injury. “The cause of a tragedy is usually an old lesson we have not learned or have forgotten along the way” (p. 364). The conclusions presented in *Firefighter Fatalities in the United States in 1999* (IOCAD Emergency Services Group, 2000) tend to support this.

After reviewing the literature and the results, it was apparent that the Clearcreek Fire District should proceed forward with implementation of an NFPA 1500 compliance plan. The results of this applied research are consistent with the findings of Terry Jackson (1998) who noted that:

The materials that were used to support this project not only identified a management tool to achieve the results that we were looking for but also revealed the fact that the Marion Fire Department was already well on its way to meeting this goal. A great number of the specific requirements of NFPA 1500 have already been addressed through ordinance or policy and simply require the documentation to be compiled to reach full compliance. It is certainly reasonable to assume that any fire department can achieve full compliance if they commit to the project and follow a basic guideline designed with their specific organization in mind. (p. 18-19)

In another example Fire Chief Larry Donner stated “When it first came out, I was concerned. But I compared it [1500] to what we were doing, and was pleasantly surprised” (Walsh, M.B. & Wojcik, K, 1990, p.44). A survey reported on in this same article note that “Most chiefs who were trying to meet 1500 said they were at least 70 percent in compliance with the standard already” (Walsh, M.B. & Wojcik, K, 1990 p.44).

Additionally, research conducted by Kerwood (1998), found that the Orange County

Emergency Services Department #1 in Vidor Texas complied with 52.7 % of the standard.

Kerwood (1998) also found that of the 47.3% of the standard where compliance was not met that 38.4 % required administrative action while 8.9% required fiscal action. Administrative actions identified by Kerwood (1998) included items such as development of standard operating procedures, setting guidelines, or appointing personnel to various job assignments.

The results of the applied research here are consistent with those noted by authors Jackson (1998), Kerwood (1998), Kerwood (1999), and Walsh, M.B. & Wojcik, K.(1990). The Clearcreek Fire District is also already well on its way to meeting the goal of NFPA 1500 compliance. At the present time Clearcreek Fire District has already achieved 75 % compliance. Many of the deficiencies identified in the performance audit are things that the Clearcreek Fire District can correct by making simple administrative changes.

The majority of the non-compliance areas (97%) are areas requiring administrative action and are similar to areas identified by Jackson (1998) and Kerwood (1998), while 3 % are areas that will require fiscal attention.

There are several other important considerations concerning NFPA 1500 compliance. There is a relationship to the legal aspects of the fire service in that the Clearcreek Fire District has an obligation and a responsibility to its firefighters to reasonably provide for their health and safety by following nationally recommended standard of care practices and any required regulations during the course of normal fire department operations. Failure to do so may increase the Clearcreek Fire District's legal liability under certain situations.

This research problem may also require organizational changes of the current Clearcreek Fire District General Operating Guidelines, so it also relates to change issues in the organizational culture of the Clearcreek Fire District. The culture of an organization may

positively or negatively impact the overall health of the organization particularly in the area of firefighter safety. There is also an ethical relationship. In addition to the legal responsibility, the Clearcreek Fire District has an ethical responsibility to its firefighters to reasonably provide for their health and safety during fire department operations.

RECOMMENDATIONS

The environment in which firefighters work has a significant level of risk for injury or death. These risks can be minimized through the implementation of nationally recommended practices, proper training of personnel, implementation of appropriate strategies and tactics, and the avoidance of unnecessary risks.

NFPA 1500 is not mandated by Ohio law, however, progressive fire departments recognize that they must do everything they can to protect their firefighters. The Clearcreek Fire District is concerned that these standards that are nationally accepted practices are not currently implemented by the Clearcreek Fire District. If a Clearcreek Fire District employee were to become injured or killed in a situation determined to be in non-compliance with the NFPA 1500 Standard, the fire department could be criticized and potentially found partially liable. Particularly, if following this standard, could have prevented the death or minimized injuries.

Clearcreek Fire District believes that the health and safety of firefighter personnel is paramount. Therefore, the following recommendations are endorsed after an analysis of the data and information derived from this research.

1. The Clearcreek Fire District should select and hire a Captain of Training and Safety Services. This individual will function as the fire department safety officer and will

oversee and manage the NFPA 1500 compliance program for the Clearcreek Fire District. The Position Description / Essential Job Function is identified in Appendix D.

2. The Clearcreek Fire District should implement the 57 NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program*, 1997 edition Compliance Recommendations identified in Appendix E.
3. Clearcreek Fire District should review the performance audit contained in Appendix C, against the newly revised NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program*, 2002 edition once the document becomes available.

The effect of these recommendations, if implemented, will allow the Clearcreek Fire District to achieve NFPA 1500 compliance and ultimately improve the health and safety of firefighters working at the Clearcreek Fire District, as well as the services they provide to the community.

Research to improve fire department operations and safety requires a continuous evaluation of that department's operations. All fire departments should review their operating procedures, guidelines, and practices in order to objectively consider adopting safety guidelines that will best work for them based upon available resources and nationally recommended practices.

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APPENDIX A

Is Your Fire Department Safe? (Dunn, 1992 p. 375)

The following are ten important safety and health recommendations set forth by NFPA 1500, the standard for fire department occupational safety and health program.

1. A fire department should adopt this NFPA standard 1500 and provide its safety procedures to firefighters involved in fire suppression, search and rescue, and other related activities. Does your fire department have such a plan?
2. A fire department should appoint a designated safety officer. Does your fire department have such an officer?
3. A fire department should have a standard operating procedure, in writing, for all fire and emergency scene operations. Does your fire department have such an S.O.P.?
4. A fire department should have fire apparatus which provide seats, seat belts, or safety harnesses for every firefighter riding the vehicle. Does your fire department have such apparatus?
5. A fire department shall provide each member with protective clothing and self contained breathing apparatus. Does your fire department provide such equipment?
6. A fire department should have an incident command system to provide safe command and control during fires and emergencies. Does your fire department have such a command system?
7. A fire department shall require all firehouses to comply with local safety codes, building codes, and health codes. Does your fire department provide safe firehouses?
8. A fire department shall have fire fighters who engage in fire and emergency operations re-examined by a physician each year. Does your fire department provide such medical re-examinations?
9. A fire department shall provide a member assistance program that identifies and assists members with stress and personal problems. Does your fire department provide such a program?
10. A fire department shall have a fireground procedure to be followed for the safe exit from a dangerous area or building in the event of a sudden dangerous change in fire conditions. Does your fire department have such a safe exit fireground procedure?

APPENDIX B

Seventeen Steps for Implementing NFPA 1500 (Peterson,1997, p10-68-10-69).

Step 1: Obtain a copy of the standard.

Step 2: Establish a project team.

Step 3: Compare NFPA 1500 with established practices.

Step 4: Identify sections where compliance is met.

Step 5: Identify sections where compliance is needed.

Step 6: Identify available alternatives or specific solutions.

Step 7: Estimate time and cost for each alternative.

Step 8: Select the best alternatives.

Step 9: Prepare a draft plan.

Step 10: Legal/risk management review.

Step 11: Submit the draft plan for adoption.

Step 12: Adopt the plan.

Step 13: Organize implementation teams.

Step 14: Identify implementation strategy.

Step 15: Implement the plan.

Step 16: Monitor progress.

Step 17: Review and update the plan regularly.

APPENDIX C

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

CLEARCREEK FIRE DISTRICT: DATE: January, 2002

PERSON(S) COMPLETING WORKSHEET

NAME: Tim Simpson TITLE: Bureau Chief, Administration and Information Services

NAME: Steve Agenbroad TITLE: Firefighter / Paramedic

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
Chapter 1 Administration				
1-4 Equivalency				
1-4.1 - Equivalent levels of qualifications	X			
1-4.2 - Training, education, competency, safety	X			
Chapter 2 Organization				
2-1 Fire Dept Organizational Statement				
2-1.1 - Written statement or policy	X			
2-1.2 - Operational response criteria		X		12/2003
2-1.3 - Statement available for inspection	X			
2-2 Risk Management Plan				
2-2.1 - Written risk management plan		X		12/2003
2-2.2 - Risk management plan coverage		X		12/2003
2-2.3 - Risk Management plans components		X		12/2003
2-3 Policy				
2-3.1 - Written fire dept occupational safety and Health Policy		X		12/2003
2-3.2 - Occupational safety and Health Program Audit		X		12/2003
2-4 Roles and Responsibilities				
2-4.1 - Fire dept responsibility		X		12/2003
2-4.1.1 - Comply with laws		X		12/2003
2-4.1.2 - Fire Dept rules, regulations, and SOPs		X		12/2003
2-4.2 - Accident investigation procedure				
2-4.2.1 - Members	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT
 (Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
2-4.2.2 - Fire Dept vehicles, equipment, facilities	X			
2-4.2.3 - Corrective action to avoid repetitive occurrences	X			
2-4.2.4 - Accident investigation records	X			
2-4.3 - Individuals shall cooperate, participate, and comply	X			
2-4.3.1 - Right to be protected and to participate	X			
2-4.4 - Member organization shall cooperate	X			
2-4.4.1 - Collective rights	N/A			
2-5 Health and Safety Officer				
2-5.1 - NFPA 1521 Fire Dept health and safety officer		X		7/2002
2-5.2 - Fire Dept health and safety officer management program		X		7/2002
2-5.3 - Fire Chief assign resources		X		7/2002
2-6 Occupational Safety and Health Committee				
2-6.1 - Establish committee		X		9/2002
2-6.2 - Committee study and review		X		9/2002
2-6.3 - Regular meetings and minutes		X		9/2002
2-7 Records				
2-7.1 - Accidents, injury, illness, exposures, death	X			
2-7.2 - Occupational exposures	X			
2-7.3 - Health (confidential)	X			
2-7.4 - Training	X			
2-7.5 - Vehicles and equipment	X			
Chapter 3 Training and Education				
3-1 General Requirements				
3-1.1 - Safety and health training	X			
3-1.2 - Training on NFPA 1500	X			
3-1.2.1 - Equivalent levels of training permitted	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
3-1.3 - Training for duties and functions	X			
3-1.4 - Training for every one	X			
3-1.5 - Qualified persons instruct	X			
3-1.6 - NFPA 1041 Instructor I	X			
3-1.7 - Safe exit from emergency operations	X			
3-1.8 - SOPs - anticipated emergency scene operations	X			
3-1.9 - Training exercises	X			
3-1.10 - Incident management system	X			
3-2 Training Requirements				
3-2.1 - NFPA 1001 Fire Fighter I	X			
3-2.2 - NFPA 1403 Live Fire	X			
3-2.3 - NFPA 1002 Driver/Operator	X			
3-2.4 - NFPA 1003 Airport Fire Fighter	N/A			
3-2.5 - NFPA 1021 Fire Officer		X		12/2004
3-2.6 - NFPA 1051 Wildland Fire Fighting	N/A			
3-2.7 - AHJ Emergency Medical Services	X			
3-2.8 - NFPA 1581 Infectious Disease Control	X			
3-2.9 - NFPA 472 Hazardous Materials Responders, all members trained to at least first responder operations level	X			
3-2.10 - NFPA 1405 Responding to Marine Vessel fires from land based companies	N/A			
3-2.11 - Minimum Training for Emergency Operations	X			
3-2.11.1 - All members aware of flammability and thermal stability of cloths	X			
3-2.12 - Members qualified and trained to use respiratory protection	X			
3-2.13 - Officers responsible for special training	X			
3-2.14 - NFPA 14-6 Training for Outside Fires	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
3-2.15 - Structural fire fighting duties additionally	X			
3-2.16 - Hazardous smoke-generating devices prohibited	X			
3-3 Frequency				
3-3.1 - Training not less than twice a year	X			
3-3.2 - Procedure, technology, or new hazard training		X		12/2002
3-3.3 - Monthly training	X			
3-3.4 - Structural fire fighting 10 monthly sessions, 24-hours annually	X			
3-3.5 - Primary assigned, 24-hour annually	X			
3-3.6 - Occasional assigned, 9-hour annually	X			
3-4 Special Operations				
3-4.1 - Specific and advanced training	X			
3-4.2 - SOPs, special operations		X		12/2004
3-4.3 - NFPA 472 Hazardous Materials Responders	X			
Chapter 4 Vehicles, Equipment, and Drivers				
4-1 Fire Department Vehicles				
4-1.1 - Safety and health are primary concerns	X			
4-1.2 - NFPA 1901 Automotive Fire Apparatus	X			
4-1.3 - NFPA 1906 Wildland Fire Apparatus	N/A			
4-1.4 - Secure tools, equipment, and SCBA	X			
4-2 Driver/Operators of Fire Department Apparatus				
4-2.1 - Successful completion of approved driver training program	X			
4-2.2 - Valid driver's license	X			
4-2.3 - Driver and officer are responsible	X			
4-2.4 - All persons secured	X			
4-2.5 - Non-emergency travel obey all laws	X			
4-2.6 - SOPs non-emergency and emergency travel	X			
4-2.7 - Emergency travel, bring fire department vehicles to a complete stop		X		12/2003

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
4-2.7.1 - Proceed only when safe		X		12/2003
4-2.8 - Unguarded and guarded railroad track(s)		X		12/2003
4-2.9 - SOPs - engine, transmission, and driveline retarders	X			
4-2.10 - SOPs - manual brake limiting valves	X			
4-3 Persons Riding in Fire Apparatus				
4-3.1 - Tailboards and standing prohibited	X			
4-3.1.1 - Secured to vehicle while performing emergency medical care		X		12/2003
4-3.1.2 - Hose loading operations		X		12/2003
4-3.1.3 - Tiller training	N/A			
4-3.2 - Helmets and eye protection for non enclosed areas	X			
4-3.3 - Alternate transportation	X			
4-3.4 - New fire apparatus meet appropriate fire apparatus standards	X			
4-4 Inspection, Maintenance, and Repair of Fire Apparatus				
4-4.1 - At least inspected weekly or within 24-hour after use	X			
4-4.2 - Preventative maintenance	X			
4-4.3 - Remove from service		X		12/2002
4-4.4 - Repairs made by qualified person	X			
4-4.5 - NFPA 1911 Pumpers Service Test	X			
4-4.6 - NFPA 1914 Aerial Ladders and Elevating Platforms	X			
4-5 Tools and Equipment				
4-5.1 - Safety and health are primary concerns	X			
4-5.1.1 - Low noise level	X			
4-5.2 - NFPA 1931 Fire Dept Ground Ladders	X			
4-5.3 - NFPA 1961 Fire Hose	X			
4-5.4 - NFPA 1964 Spray Nozzle	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
4-5.5 - At least inspected weekly or within 24-hour after use, inventory and record on equipment used for training	X			
4-5.6 - Tested at least annually	X			
4-5.7 - Remove from service	X			
4-5.8 - NFPA 1581 Fire Department Infection Control	X			
4-5.9 - NFPA 1932 Fire Department Ground Ladders	X			
4-5.10 - NFPA 1962 Fire Hose	X			
4-5.11 - NFPA 10 Portable Fire Extinguishers	X			
Chapter 5 Protective Clothing and Protective Equipment				
5-1 General				
5-1.1 - FD provide PPE	X			
5-1.2 - Use of PPE	X			
5-1.3 - PPE training	X			
5-1.4 - NFPA 1581 Infection Control Program - Protective Clothing Cleaning Every 6 Months		X		12/2002
5-1.5 - PPE cleaning	X			
5-1.6 - NFPA 1975 Work Uniforms	X			
5-1.7 - Avoid wearing any clothing that is considered unsafe	X			
5-1.8 - Laundry service for contaminated clothing	X			
5-1.8.1 - Washing machines for protective or work clothing	X			
5-2 Protective Clothing for Structural Fire Fighting				
5-2.1 - NFPA 1971 Protective Clothing	X			
5-2.1.1 - Minimum 2" overlap of all protective clothing layers	X			
5-2.1.2 - Overlap not required on continuous composite protections	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-2.1.3 - Protective resilient wristlets provided	X			
of 5-2.1.4 - Maintenance and inspection clothing and equipment	X			
protective 5-2.1.5 - All members to wear ensembles	X			
5-3 Respiratory Protection				
5-3.1- Respiratory protection program - members certified for equipment use at least annually	X			
5-3.1.1 - NFPA 1404 SCBA program	X			
5-3.2 - Written procedures for safe use of respiratory protection	X			
5-3.3 - Provide and use SCBA	X			
(a) Hazardous atmosphere	X			
(b) Suspected hazardous	X			
(c) Can become hazardous	X			
5-3.4 - Closed-circuit SCBA	X			
5-3.5 - Keep facepiece in place	X			
5-3.6 - Grade D air; ANSI/CGA G7.1	X			
5-3.7 - Certification and documentation for vendor-provided air	X			
5-3.7.1 - FD manufactures own air tested every three months		X 6 months		12/2002
5-3.7.2 - FD obtains compressed breathing air--tested every three months	N/A			
5-3.8 - Hydrostatic test cylinders	X			
5-3.9 - Facepiece qualitative fit test		X		12/2003
5-3.10 - Beards and facial hair	X			
5-3.11 - Spectacles		X		12/2003
5-3.11.1 - Spectacle strap or temple temple bars prohibited		X		12/2003
5-3.11.2 - Contact lens permitted	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-3.12 - Facepiece/face seal	X			
5-3.12.1 - Head covering breaking seal prohibited	X			
5-3.12.2 - SCBA facepiece/head harness worn under protective hood	X			
5-3.12.3 - SCBA facepiece/head harness worn under hazardous chemical protective clothing helmet	X			
5-3.12.4 - Helmets shall not interfere with facepiece-to-face seal	X			
5-4 Protective Clothing for Proximity Fire Fighting Operations				
5-4.1 - NFPA 1976 Proximity Protective Clothing	N/A			
5-4.1.1 - Minimum 2" overlap of all proximity protective clothing layers	N/A			
5-4.1.2 - Overlap not required on continuous full thermal and radiant heat protective coveralls	N/A			
5-4.2 - NFPA 1971 Helmets and Radiant Reflective Criteria	N/A			
5-4.3 - NFPA 1971 Gloves & Radiant Reflective	N/A			
5-4.4 - NFPA 1971 Footwear and Radiant Reflective Criteria	N/A			
5-4.5 - NFPA 1971 Protective Clothing--hoods and radiant reflective criteria	N/A			
5-4.6 - Radiant reflective criteria over SCBA worn over the outside of proximity protective clothing	N/A			
5-5 Protective Clothing for Emergency Medical Operations				

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-5.1 - NFPA 1999 Emergency Medical Protective Clothing	X			
5-5.2 - Members shall not initiate patient care before emergency medical gloves are in place	X			
5-5.2.1- Fire fighters likely to be exposed to airborne infectious disease provided with NIOSH-approved Type C respirators			X	12/2003
5-5.3 - Members shall use emergency medical body and face protections	X			
5-5.4 - NFPA 1581 Infection Control Program Protective Clothing Cleaning	X			
5-5.5 - NFPA 1971 Gloves During Operations where sharp or rough edges likely to be encountered	X			
5-6 Chemical-Protective Clothing for Hazardous Chemical Emergency Operations				
5-6.1 - Vapor-protective garments	X			
5-6.1.1 - NFPA 1991 Vapor Protective Suits	X			
5-6.1.2 - Garment appropriate for specific hazard chemical emergency	X			
5-6.1.3 - SCBA during hazardous chemical emergencies	X			
5-6.1.4 - Use only in vapor hazard atmospheres	X			
5-6.1.5 - Use for protective from liquid splash or solid chemicals and particulates protection permitted	X			
5-6.2 - Liquid splash-protective garments	X			
5-6.2.1 - NFPA 1992 Liquid Splash - Protective Suits	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-6.2.2 - Garment appropriate for specific hazard chemical emergency	X			
5-6.2.3 - Respiratory protection	X			
5-6.2.4 - Use for protection from chemicals in vapor form or from unknown liquid chemicals or chemical mixture prohibited	X			
5-6.2.5 - Not for carcinogens	X			
5-6.2.6 - Not for skin toxins	X			
5-6.2.7 - Use only for liquid splash protection	X			
5-6.2.8 - Use for protection from solid chemicals and particulates permitted	X			
5-6.3 - Support functions protective garments	X			
5-6.3.1 - NFPA 1993 Support Function Protective Suits	X			
5-6.3.2 - Garment appropriate for intended environment	X			
5-6.3.3 - Respiratory protection	X			
5-6.3.4 - Not for use in hot zone	X			
5-6.3.5 - Not for carcinogen	X			
5-6.3.6 - Not for skin toxins	X			
5-6.3.7 - Use only for support functions	X			
5-6.3.8 - Use for protection from solid chemical and particulated outside hot zone permitted	X			
5-6.4 - Inspection, maintenance, and disposal of chemical-protective clothing	X			
5-6.4.1 - Manufacturer's recommendation	X			
5-6.4.2 - Dispose of contaminated garments	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT
 (Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-7 Protective Clothing and Equipment for Wildland Fire Fighting				
5-7.1 - Operating guidelines	N/A			
5-7.2 - NFPA 1977 Protective Clothing	N/A			
5-7.3 - Overlap of clothing at waist, ankles, and wrists	N/A			
5-7.4 - NFPA 1977 Protective Helmet	N/A			
5-7.5 - NFPA 1977 Protective Gloves	N/A			
5-7.6 - NFPA 1977 Protective Footwear	N/A			
5-7.7 - Members provided with approved fire shelter	N/A			
5-7.7.1 - Members trained in proper deployment of fire shelter at least annually	N/A			
5-7.8 - Members provided with 2 quarts of water; process established for replenishment of water supplies	N/A			
5-7.9 - Members provided with laminated pocket card with safety orders and "watch-out" situations	N/A			
5-8 Personal Alert Safety System (PASS)				
5-8.1 - NFPA 1982 PASS for Hazardous Area	X			
5-8.2 - Tested at least weekly and prior to each use	X			
5-9 Life Safety Ropes and System Components				
5-9.1 - NFPA 1983 Life Safety Rope, Harness, and Hardware		X		12/2003
5-9.2 - Life safety rope		X		12/2003
5-9.3 - Life safety rope inspection before reuse		X		12/2003
(a) No damage from fires, chemicals, or abrasives		X		12/2003
(b) No impact load		X		12/2003
(c) No materials known to deteriorate ropes		X		12/2003
* Destroyed after emergency use if failed 5-8.3		X		12/2003

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
5-9.4 - Inspection by qualified inspector		X		12/2003
5-9.5 - Records for each life safety rope used at incident/training		X		12/2003
5-10 Eye and Face Protection				
5-10.1 - ANSI Z87.1 Practice for Occupational & Educational Eye and Face Protection	X			
5-10.2 - SCBA facepieces--primary face and eye protection	X			
5-10.3 - Helmet face shield--partial face protection	X			
5-11 Hearing Protection				
5-11.1 - Use >90 dBA apparatus	X			
5-11.2 - Use >90 dBA tools and equipment		X		12/2003
5-11.3 - Hearing conservation program		X		12/2004
5-12 New and Existing Protective Clothing and Protective Equipment				
5-12.1 - New PPE meet current standards	X			
5-12.2 - Existing PPE shall have met standards when manufactured	X			
Chapter 6 Emergency Operations				
6-1 Incident Management				
6-1.1 - Prevent accidents and injuries	X			
6-1.2 - NFPA 1561 ICS in Writing	X			
6-1.3 - IC responsible for safety	X			
6-1.4 - Span of control	X			
6-1.5 - IC incident responsibility	X			
6-1.6 - NFPA 1561 Fire Dispatch and Fireground Communications	X			
6-2 Risk Management During Emergency Operations				
6-2.1 - Risk management in incident command	X			
6-2.1.1 - Risk management principles	X			
6-2.1.2 - Elevating members' risks	X			
6-2.2 - Risk management principles define limits of acceptable/unacceptable positions/functions	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT
 (Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
6-2.3 - Qualified personnel--safety of operations	X			
6-2.4 - IC to ensure body armor available for civil disturbances	X			
6-2.5 - Incidents involving risk of physical violence	X			
6-3 Accountability				
6-3.1 - Written SOP--NFPA 1561 Incident Management System	X			
6-3.1.1 - Local conditions and characteristics	X			
6-3.2 - Members actively participate	X			
6-3.3 - IC responsible	X			
6-3.3.1 - IC maintain awareness	X			
6-3.3.2 - Sector officers responsible	X			
6-3.3.3 - Company officers responsible	X			
6-3.3.4 - Fire fighters remain with company	X			
6-3.3.5 - Fire fighters responsible	X			
6-3.4 - Used at all incident	X			
6-3.5 - Accountability system effective	X			
6-3.6 - Additional accountability officers	X			
6-3.7 - Tracking and accountability of assigned companies	X			
6-4 Members Operating at Emergency Incidents				
6-4.1 - Fire dept shall provide adequate number of personnel to safely conduct emergency scene operations; operations limited to those that can be safely performed by the personnel available the scene		X		12/2005
6-4.2 - Direct supervision	X			
6-4.3 - Teams of two or more with a communication	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
6-4.4 - Initial state--one team assigned standby person		X		12/2004
6-4.4.1 - Initial stage		X		12/2004
6-4.4.2 - Standby member permitted to perform other duties outside of hazardous area		X		12/2004
6-4.4.3 - Full protective clothing, protective equipment, and SCBA		X		12/2004
6-4.4.4 - Second team assignment one rapid intervention crew		X		12/2004
6-4.4.5 - In imminent life-threatening situation, action to prevent loss of life permitted with less than four personnel		X		12/2004
6-4.5 - Highest level of emergency medical care for special operations--basic life support minimum	X			
6-4.5.1 - NFPA 473--EMS for hazardous materials operations	X			
6-4.5.2 - Basic life support for other emergency operations	X			
6-4.6 - Secured to aerial device		X		12/2002
6-4.7 - Florescent retroreflective material -- MV traffic		X		
6-4.7.1 - Apparatus utilized as shield		X		12/2002
6-4.7.2 - Warning devices for oncoming traffic		X		12/2002
6-5 Rapid Intervention for Rescue of Members				
6-5.1 - Rescue of members		X		12/2003
6-5.2 - Rapid intervention crew		X		12/2003
6-5.3 - Composure and structure		X		12/2003
6-5.4 - Crew(s) status--early stages of incident		X		12/2003
6-5.5 - Crew(s) status--expanded incident		X		12/2003
6-5.6 - Special operations rapid intervention crew(s)		X		12/2003

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
6-6 Rehabilitation During Emergency Operations				
6-6.1 - SOP for Rehabilitation of Members		X		12/2003
6-6.2 - IC provide rest and rehab	X			
6-6.3 - On-scene rehabilitation to include basic life support	X			
6-6.4 - Each member responsible to communicate rest and rehab needs	X			
6-7 Civil Unrest/Terrorism				
6-7.1 - SOPs--Civil Disturbance	X			
6-7.2 - Interagency agreement		X		12/2003
6-7.2.1 - Indication of life and death situation requiring law enforcement intervention		X		12/2003
6-7.3 - Coordinate with law enforcement IC	X			
6-7.4 - Fire Dept IC identify and react to violent situations	X			
6-7.5 - Fire Dept IC talk with law enforcement IC	X			
6-7.6 - Stage resources in a safe area	X			
6-7.7 - Secure law enforcement when violence occurs	X			
6-7.8 - Fire Dept supports to SWAT	N/A	X		12/2003
6-8 Post-Incident Analysis				
6-8.1 - SOPs--Post-Incident Critique		X		12/2002
6-8.2 - Critique involves incident safety officer		X		12/2002
6-8.3 - Basic review on the safety and health of members	X			
6-8.4 - Identify needed action	X			
6-8.5 - Standard action plan		X		12/2002
Chapter 7 Facility Safety				
7-1 Safety Standards				
7-1.1 - Comply with codes	X			
7-1.2 - NFPA 1581 Infection Control	X			
7-1.3 - All facilities--smoke detectors	X			
7-1.4 - All facilities--carbon monoxide detectors	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
7-1.5 - New/existing facilities comply with Life Safety Code	X			
7-1.6 - Prevent exhaust exposure	X			
7-1.7 - Smoke-free areas	X			
7-2 Inspections				
7-2.1 - Annual code inspection		X		12/2002
7-2.2 - Monthly safety inspection		X		12/2002
7-3 Maintenance and repairs				
7-3.1 - Established maintenance system	X			
Chapter 8 Medical and Physical				
8-1 Medical Requirements				
8-1.1 - Medical evaluation and certification before becoming a member	X			
8-1.2 - NFPA 1582 Medical Requirements	X			
8-1.3 - Periodic medical evaluation			X	12/2005
8-1.4 - No cost to candidate, current fire fighter or member	X			
8-1.5 - Under the influence of alcohol or drugs	X			
8-2 Physical Performance Requirements				
8-2.1 - Fire Dept develop requirements	X			
8-2.2 - Certification for use of respiratory protection conducted annually		X		12/2003
8-2.3 - Candidates certified by Fire Dept	X			
8-2.4 - Current fire fighters annually certified by Fire Dept		X		12/2003
8-2.5 - Physical performance rehabilitation		X		12/2003
8-3 Physical Fitness				
8-3.1 - Physical fitness program		X		12/2005
8-3.2 - Structured participation of all members		X		12/2005
8-3.3 - Medical sup. of physical fitness program		X		12/2005
8-4 Confidential Health Data Base				
8-4.1 - Confidential permanent health file	X			
8-4.2 - Individual/group records	X			
8-4.3 - Record autopsy results	X			

APPENDIX C continued

CLEARCREEK FIRE DISTRICT NFPA 1500 PERFORMANCE AUDIT

(Based on the NFPA 1500 Fire Department Occupational Safety and Health Program Worksheet 1997)

Standard Content	Compliance	Compliance with Administrative Action	Compliance with Fiscal Action	Expected Compliance Date
8-5 Infection Control				
8-5.1 - Fire Dept limit or prevent members exposure	X			
8-5.2 - NFPA 1581 Infection Control	X			
8-6 Fire Department Physician				
8-6.1 - Fire Dept Physician	X			
8-6.2 - Provide medical guidance	X			
8-6.3 Licensed doctor	X			
8-6.4 - Availability	X			
8-7 Post Injury/Illness Rehabilitation				
8-7.1 - Rehabilitation program	X			
8-7.2 - Physical performance assessment prior to member returning to full duty	X			
Chapter 9 Member Assistance and Wellness Program				
9-1 Member Assistance Program				
9-1.1 - Provide member assistance program	X			
9-1.2 - Written policy	X			
9-1.3 - Written rules for records	X			
9-2 Wellness Program				
9-2.1 - Health promotion activities	X			
9-2.2 - Smoking/tobacco cessation program	X			
Chapter 10 Critical Incident Stress Program				
10-1 General				
10-1.1 - Physician to provide guidance	X			
10-1.2 - Written policy--program to relieve stress		X		12/2003
10-1.3 - Program available to members for situations involving psychological and physical well-being		X		12/2003

APPENDIX D

Clearcreek Fire District

Position Description / Essential Job Function

Position Title: Captain

Division: Fire District / Fire and Rescue Department
Training and Safety Services

Reports to: Executive Services
Emergency and Support Services
Administration and Information Services

FLSA Status: Exempt (career)

Date Created: February 25, 2002

Last Revision date:

Definition:

This employee provides leadership to the Clearcreek Fire District / Fire and Rescue Department. This person will manage of all aspects of departmental Training and Safety services. This person acts as a member of the department's Executive Leadership Team and is assigned to the Chief of Department's Executive Staff. As such, the Captain of Training and Safety Services has the duty and responsibility to participate as a sincere team member, constantly looking for ways in which the overall performance of the department can be improved.

The Captain of Training and Safety Services must use creativity, innovation and fiscal responsibility, with the end goal of providing quality service to our internal and external customers, in every aspect of his/her duties. The Captain of Training and Safety Services will act as a Command Officer or other aspects at incidents and will be charged with supervision of numerous individuals at the emergency incident scene.

The Captain of Training and Safety Services is required to exercise discretion and good judgment in conducting the day to day operations of his/her area of responsibility and the department. The Captain of Training and Safety Services will keep an open and honest line of communication with the Chief of Department and advise him on all matters of divisional or organizational importance.

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Work Schedule:

The Captain of Training and Safety Services work schedule is outlined by the Chief of Department, Clearcreek Township Administration, Clearcreek Township Board of Trustees and the Clearcreek Fire District Career General Operational Guidelines.

Essential Functions of the Position:

- Assist the Chief of Department in the area of inter-jurisdictional cooperation, as well as other administrative actions
- Act as liaison to other fire and rescue departments in and surrounding Warren County, area hospitals, local utilities, fire and medical training centers, the Ohio Fire Academy and the National Fire Academy
- Ensure a comprehensive system of county-wide / joint county emergency and non-emergency communication and response. Insist that service requests (calls) for assistance are answered in a quick and efficient manner with an exceptional level of quality and expertise
- Responsible for planning, organizing and directing activities of the Training and Safety Services and for developing Fire and EMS training programs and overseeing the implementation thereof
- Ensure operational readiness of all Fire and EMS personnel through an annual performance evaluation (NFPA 1001 guidelines)
- Develop specialized training programs such as pump operations, aerial tower operations and driver training programs
- Develop and maintain an efficient computerized filing system of all training records
- Researches and develops equipment specifications
- Develop and recommend policies and procedures for Fire and EMS Operations
- Reviews and approves equipment repair needs and inspects all training equipment
- Responsible for and participates as a member of the Warren County Hazardous Materials Team
- Works with Shift Commanders (Shift Lieutenants) in providing daily shift training
- Oversees initial physical agility testing of all new personnel and develops and oversees annual physical fitness and wellness program
- Works closely with the Bureau Chief in record keeping of all ISO, NFPA and State of Ohio records
- Is the Fire District recruitment officer and develops brochures, flyers and participates at career days throughout the district
- Administers new and re-evaluation entry performance evaluation and make recommendation
- Performs post incident analysis of all significant runs
- Performs post accident analysis of all significant incidents
- Act as liaison to the Warren County Public Safety Coordinator

APPENDIX D continued

- Acts as the NFPA 1500 Compliance Officer and OSHA safety manager
- Ensures station and apparatus safety and readiness
- Acts as the fire ground (incident) safety officer and has direct communications to command on safety related items
- Oversees all aspects of infectious control (including blood borne pathogen) and the reporting of such
- Acts as the injury prevention officer and reviews all worker compensation claims
- Oversees all initial and continuing education both Fire and EMS
- Oversees annual SCBA Fit Testing
- Oversees quarterly personal protective equipment, SCBA and PASS inspections
- Develop and participate in designing training programs related to Fire and EMS for area citizens, scout troops CPR and First Aid) and develops a Citizens Fire/EMS Academy and oversees its implementation
- Prepare a monthly report and provide statistical data as required
- Recommend personnel for hire, termination and discipline as outlined by the Clearcreek Fire District General Operating Guidelines (CCFD GOGL)
- Responsible to ensure that all reports are filled out in their entirety and submitted for data collection / review
- Routinely attend meetings and represents the department at functions outside of normal working hours
- Perform other departmental functions as directed by the Chief of Department

Required Knowledge and Abilities:

The position of Captain of Training and Safety Services requires the ability to make quick decisions and display extensive administrative knowledge and command experience. The Captain of Training and Safety Services must possess extensive knowledge in public administration and the supervision of various operations and administrative functions within a modern, progressive fire and rescue department. The Captain of Training and Safety Services must have the ability to use various manuals of codes and standards, as well as related audio-visual and computer instruments.

The Captain of Training and Training and Safety Services must be familiar with local, state and federal laws governing the application of all aspects of Fire and EMS training including hazardous materials, weapons of mass destruction, rescue, and other areas related to the fire service. The Captain of Training and Safety Services must be skilled in priority planning and scheduling for the operations of the Training and Safety

Services, be well read and continually kept up on current and future trends in emergency services. The Captain of Training and Safety Services must possess excellent interpersonal and communications skills and a thorough understanding of personnel behavior and human resource leadership.

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The physical demands of the job are varied. While the Captain of Training and Safety Services will, at times, have to sit for long periods of time while performing his/her functions, i.e. attending meetings, preparing budgets, planning and writing procedures, and reviewing data, the Captain of Training and Safety Services will, on many other occasions, have to stand and/or walk for extended times i.e., assuming personal command at an incident scene, climbing ladders, providing emergency medical care, lifting customers/patients, conducting training exercises, teaching in classroom settings, etc.

The Captain of Training and Safety Services must be able to get to and remain at fire scenes and accident scenes in order to direct, evaluate and monitor the performance of the officers and firefighters in his/her command. The Captain of Training and Safety Services is called upon to drive and climb on fire apparatus and vehicles and must be able to wear turnout gear at fire and emergency scenes. The Captain of Training and Safety Services, like those in his/her command, may be exposed to extreme heat, cold and wet conditions at fire and emergency scenes and must be capable of using protective equipment when at the scene of a toxic chemical spill or condition.

The job demands a high level of mental functioning. The Captain of Training and Safety Services applies principals of logic and science to define problems, collect data, establish facts and draw valid conclusions. The Captain of Training and Safety Services interprets a variety of technical instructions. Basic algebra, geometry and shop math are needed in evaluation of equipment and budget statistics. Mastery of computer systems and related software is essential. Reading speed and comprehension must be sufficient for keeping abreast of state of the art scientific and technical developments and to evaluate and respond to directives from the Chief of Department.

The job requires a temperament compatible with leadership. The person holding this position must possess loyalty and integrity beyond reproach and demonstrate well-developed interpersonal management skills, be mature, sensitive, tactful and comfortable with an organization in dynamic change. The ability to work on multiple priorities at the same time and change course in midstream is vital. The Captain of Training and Safety Services must accept responsibility, pursued and motivate employees and the public, and make judgments and decisions. The job demands an ability to perform under stressful situations or conditions at emergency incidents and under the constant stress of managerial responsibility.

Qualifications:

Experience in leadership, public relations, planning, organizing, standards and current Fire/EMS service knowledge of procedures are a must. The minimum requirements for the successful candidate is to be currently employed as a full-time firefighter/paramedic in a career or combination fire department for a minimum of three years and posses an

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associates' degree or equivalent with an emphasis in public administration, fire science, or a closely related field.

Certification as a (NFPA 1001 Firefighter 2) Ohio Certified Firefighter 2, Paramedic, Fire and/or EMS Instructor is required. In addition, the candidate must display competency in all aspects of the NFPA 1021 (Fire Officer Professional Qualifications), NFPA 1041 (Fire Service Instructor Qualifications) and NFPA 1521 (Fire Department Safety Officer), Hazardous Material Technician, Fire Safety Inspector and/or capable of being easily and quickly obtained.

As a member of the Leadership Team, all officers are required to take rotating Operations Call. The on-call officer will be required to stay in the fire district on their tour of call until relieved by the next assigned on-call officer. If you are member of another fire district / fire and rescue department in or outside the State of Ohio, you will be required to respond directly, without delay, to an emergency scene, upon dispatch, request from another Leadership Team member, or when requested by the Chief of Department. It is your responsibility to secure adequate coverage for said fire district / fire and rescue department so you may respond back to Clearcreek Fire District/jurisdiction without delay.

Rate of Compensation:

This position of Captain of Training and Safety Services is compensated per the Chief of Department, Clearcreek Township Administration, Clearcreek Township Board of Trustees and the Clearcreek Fire District Career General Operational Guidelines.

APPENDIX E

NFPA 1500 Compliance Recommendations for the Clearcreek Fire District:

1. 2-1.2 The Fire District Administration will put a committee together to evaluate the current general operating guidelines that covers fireground operating procedures. The committee shall review these guidelines and make any recommendations for changes to the Chief of the Department. They shall also make recommendations to create any new fireground operating procedures that are necessary.
2. 2-2 Draft a comprehensive Risk Management plan, revise and reissue the plan after consulting with the Chief of Department and Safety Committee.
3. 2-3.1 Draft a Safety Policy that distributes the safety responsibilities and recognizes the need to provide a safe and healthy work environment. This Policy should do everything possible to make the Clearcreek Fire District a safe and healthful workplace. The draft safety policy should be developed by the safety officer and presented to the Chief of Department and Safety Committee.
4. 2-4.1 Draft an occupational safety and health program that recognizes and reduces the inherent risks involved in the operation of the Fire District.
5. 2-4.1.2 Establish and enforce rules, regulations, and general operating guidelines to make Clearcreek Fire District as safe as work environment as possible.
6. 2-5.1 Follow the current plan to hire a Safety/ Training.. This person should be given the training and education necessary to fully meet NFPA.
7. 2-5.3 The Chief of Department shall assign or make available assistant safety officers and resources as required to fulfill the requirements of the occupational safety and health program.
8. 2-6 An occupational health and safety committee shall be established and shall serve in an advisory capacity to the Chief of Department. The Health and Safety Officer shall not be the chairman but be actively involved in the committee. This committee should meet quarterly. An agenda of the current meeting should be distributed two weeks prior to each meeting and minutes of each meeting shall be kept.
9. 3-2.5 The Training Officer shall review the present Officer Training Program and report the status of our Officer Training Program to the Safety Committee, listing training requirements needed to bring the Clearcreek Fire

APPENDIX E continued

District into full compliance with NFPA 1021, *Standard for Fire Officer Professional Qualifications*. This report should be presented to the Safety Committee.

If present program does not meet NFPA 1021 *for Fire Officer Professional Qualifications* the training officer shall develop a program meeting the standard.

All members being promoted to a Fire / EMS Officer rank shall meet the Requirements of NFPA 1021, *Standard for Fire Officer Professional Qualifications, Level I*, within one year of appointment.

10. 3-3.2 Draft a policy that handles whenever a general operating guideline is changed, new technology is introduced, new hazards are identified in the work environment, appropriate training and education shall be provided for all affected members.
11. 3-4.2 The Fire District shall develop written general operating guidelines that describe the actions to be taken in situations involving special operations and shall include these general operating guidelines in an advanced training and education program.
12. 4-2.7 Draft a policy requiring the drivers of Fire District vehicles to bring them to a complete stop under any of the following conditions:
 - a. When directed by a law enforcement officer.
 - b. Red traffic lights.
 - c. Stop signs.
 - d. Negative right-of-way intersections.
 - e. Blind intersections.
 - f. When the driver cannot account for all lanes of traffic in an intersection.
 - g. When other intersection hazards are present.
 - h. When encountering a stopped school bus with flashing warning lights.
13. 4-2.8 Draft a policy requiring all emergency response drivers of fire district vehicles shall come to a complete stop at all unguarded railroad crossings on mutual aid responses be added to the already existing General Operating Guideline that covers emergency vehicle.
14. 4-3.1.1 Purchase the equipment and draft a policy requiring members actively performing emergency medical care while the vehicle is in motion, be secured to the vehicle by a seat belt or safety harness designed for occupant restraint, to the extent consistent with the effective provision of such emergency medical care. All other persons in the vehicle shall be

APPENDIX E continued

seated and belted in approved riding positions while the vehicle is in motion.

15. 4-3.1.2 Draft a policy prohibiting hose loading operations while the vehicle is in motion.

16. 4-4.3 Draft a policy establishing a list of major defects to be utilized to evaluate when a vehicle should be declared unsafe and placed out of service until repaired.

17. 5-1.4 Draft a policy that all structural firefighting protective clothing be cleaned at least every 6 months. Allocate funds to purchase gear bags for all members. Along with this purchase a policy shall be drafted instructing all members to keep their gear in their gear bags unless on duty.

18. 5-3.2 Draft a policy to address the safe use of respiratory protection in hazardous atmospheres that can be encountered in normal operations and in emergencies.

19. 5-3.7.1 The Fire District shall provide documentation that a sample of breathing air obtained directly from the point of transfer from the filling station to the SCBA cylinders has been tested quarterly and that it meets the requirements of 5-3.6 in NFPA 1500.

20. 5-3.9 Allocate funds to purchase SCBA masks for all members and draft a policy requiring the facepiece seal capability of each member be verified by qualitative fit testing on an annual basis and whenever new types of SCBA or face pieces are issued. Each member shall be tested before being permitted to use SCBA in a hazardous atmosphere.

21. 5-3.11 Draft a policy that when members must wear spectacles while using full facepiece respiratory protection, the respiratory protection full facepiece shall be fitted with spectacles in such a manner that it shall not interfere with the facepiece-to-face seal.

22. 5-3.11.1 Draft a policy stating that any spectacles with any strap or temple bars that pass through the facepiece-to-face seal area shall be prohibited.

23. 5-5.2.1 Purchase all members who perform emergency medical care or are likely to be exposed to airborne infectious disease with NIOSH-approved Type C respirators certified to meet 42 CFR 84.

24. 5-9.1 Draft a policy stating that all life safety rope used for rescues at fires, or other emergency incidents or for training shall be permitted to be reused if inspected before and after such use in accordance with the manufacturers

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instructions and provided the following criteria are met:

- a. The rope has not been visually damaged by exposure to heat, direct flame impingement, chemical exposure or abrasion.
 - b. The rope has not been subjected to any impact load.
 - c. The rope has not been exposed to chemical liquids, solids, gases, mists, or vapors of any material known to deteriorate rope.
25. 5-9.4 Draft a policy requiring that all rope inspections shall be conducted by qualified inspectors in accordance with rope inspection procedures established and recommended as adequate by the rope manufacturer to assure rope is suitable for reuse.
26. 5-9.5 Draft a policy requiring all records to be maintained to document the use of each life safety rope used at fires, other emergency incidents and training.
27. 5-11.2 Draft a policy providing and requiring all personnel to wear hearing protection when exposed to noise in excess of 90dBA.
28. 5-11.3 The Fire District shall engage in a hearing conservation program to identify and reduce or eliminate potentially harmful sources of noise in the work environment.
29. 6-3.1 The Fire District Safety Committee shall revise its current accountability guideline to comply with the requirements of NFPA 1500, *Fire Department Occupational Safety and Health Program*. The accountability system should be used on all incidents involving more than 1 engine and 1 medic.
30. 6-4.1 The Fire District shall provide an adequate number of personnel to safely conduct emergency scene operations. These operations shall be limited to those that can be safely performed by the personnel available at the scene.
31. 6-4.2 Draft a policy stating that when inexperienced members are working at an incident, direct supervision shall be provided by officers or more experienced members.
32. 6-4.3 Draft a policy stating that all members operating in hazardous areas at emergency incidents shall operate in teams in two or more. Team members operating in hazardous areas shall be in communication with each other through visual, audible, physical means or safety guide rope, in order to coordinate their activities. Team members shall be in close proximity to each other to provide assistance in case of an emergency.

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33. 6-4.4 Draft a policy requiring that in the initial stages of an incident where only 1 team is operating in a hazardous area at a working structure fire, a minimum of 4 individuals is required, consisting of 2 individuals present outside the hazard area for assistance or rescue at emergency where entry into the danger area is required. The standby members shall be responsible for maintaining a constant awareness of the number and identity of members operating in the hazardous area, their location, function, and time of entry. The standby members shall remain in radio, visual, voice, or signal line communications with the team.

34. 6-4.5 Draft a policy stating that the initial attack operations shall be organized to ensure that, if upon arrival at the emergency scene, initial attack personnel find an imminent life-threatening situation where immediate action could prevent the loss of life or serious injury, such action shall be permitted with less than 4 personnel. No exception shall be permitted when there is no possibility to save lives. Any such actions taken in accordance with this section shall be thoroughly investigated by the fire department with a written report submitted to the Chief of the Department.

35. 6-4.6 Draft a policy stating that when members are operating from aerial devices, they shall be secured to the aerial device by an approved ladder belt.

36. 6-4.7 Draft a policy stating that when members are operating at an emergency scene and their assignment places them in potential conflict with motor vehicle traffic, they shall wear a garment with fluorescent reflective material.

37. 6-4.7.1 Draft a policy stating that apparatus shall be utilized as a shield from oncoming traffic wherever possible.

38. 6-4.7.2 Draft a policy stating that when acting as a shield, apparatus warning lights shall remain on. If appropriate traffic cones and illuminated warning devices shall be used to warn oncoming traffic of the emergency operations. The headlights of vehicles shall be shut off when facing oncoming traffic.

39. 6-5 Draft a policy stating that the Fire District shall provide personnel for the rescue of members operating at emergency incidents if the need arises. This policy should be followed up by a formal standard operating procedure for rapid intervention crews.

40. 6-6 Draft a policy for the Fire District on how rehabilitation shall occur during emergencies.

41. 6-7.1 Draft a policy for the Fire District that establishes a standardized

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approach to the safety of all members at incidents that involve violence, unrest, or civil disturbance. This policy shall include an agreement with the City of Springboro and Clearcreek Township Police Departments to provide protection for the Fire District members.

42. 6-7.2.1 Draft a policy to develop a standard communication method that indicates that an incident crew is faced with a life or death situation requiring immediate law enforcement intervention.

43. 6-7.8 Draft a policy for Fire District companies that provide support to law enforcement special operations such as SWAT teams.

44. 6-8 The Fire District shall draft a policy establishing requirements for a standardized post-analysis of significant incidents.

45. 7-1.5 Have the safety committee evaluate the fire station and make certain that it complies with NFPA 101, *Life Safety Code*. The committee shall develop a policy to see that all necessary changes are made to comply with the standard.

46. 7-2.1 Draft a policy requiring that all Fire District facilities shall be inspected at least annually to provide for compliance of the NFPA 101, *Life Safety Code*.

47. 7-2.2 Draft a policy stating that all Fire District facilities shall be inspected at least monthly to identify and provide corrective action.

48. 8-1.3 Draft a policy stating that all members who engage in fire suppression shall be medically evaluated as specified in NFPA 1582, *Standard on Medical Requirements for Fire Fighters*, on at least an annual basis. Members who have not met the medical evaluation requirements shall not be permitted to engage in fire suppression activities. Where medical evaluations are conducted by a physician other than the Fire District physician, the evaluation shall be subject to review and shall be approved by the Fire District physician.

49. 8-2.1 The Fire District safety committee shall evaluate the current performance requirements for candidates to see if it meets the objectives of the Fire District.

50. 8-2.2 Draft a policy stating that medical certification for the use of respiratory protection shall be conducted annually.

51.8-2.4 Draft a policy stating that all members engaging in emergency operations shall be annually evaluated and certified by the fire district as meeting physical performance requirement specified in 8-2.1 of NFPA 1500,

APPENDIX E continued

Fire Department Occupational Safety and Health Program. The performance requirement shall be included in the member's annual evaluation. Members who do not meet the required level of physical performance shall not be permitted to engage in emergency operations.

52. 8-2.5 Draft a policy stating members that are unable to meet the physical performance requirements specified in 8-2.1 of NFPA 1500, *Fire Department Occupational Safety and Health Program* shall enter a physical performance commensurate with the individuals assigned duties and responsibilities.

53. 8-3.1 Draft a policy stating that the Fire District shall establish and provide a physical fitness program to enable members to develop and maintain an appropriate level of physical fitness to safely perform their assigned functions. The maintenance of fitness levels specified in the program shall be based on fitness standards determined by the Fire District physician that reflect the individual's assigned functions and activities and that are intended to reduce the probability and severity of occupational injuries and illnesses.

54. 8-3.2 Draft a policy stating that the Fire District shall require structured participation of all members in the physical fitness program.

55. 8-3.3 The Fire District shall assign a health and fitness coordinator. The health and fitness coordinator shall administer all aspects of the physical fitness and health enhancement program. The health and fitness coordinator shall act as direct liaison between the Fire District physician and the Fire District in accordance with NFPA 1582, *Standard on Medical Requirements for Fire Fighters*.

56. 10-1.2 Draft a policy requiring the Fire District to adopt a written policy that establishes a program designed to relieve the stress generated by an incident that could adversely affect the psychological and physical well being of Fire District members.

57. 10-1.3 The program (10-1.2) shall be made available to members for incidents including but not limited mass casualties, large life loss incidents, fatalities involving children, fatalities or injuries involving Fire District members, and any other situations that affect the psychological and physical well being of Fire District members.