CHAPTER EIGHT
SAFETY AND HEALTH

This Chapter includes sections on national safety and wellness standards as well as accepted principles and practices for emergency first responders, and describes how the Lower Merion Fire Department (LMFD) and its fire companies measure up to those standards.

OVERVIEW

In recent years, there has been an increasing focus on the safety of emergency service personnel—especially for those directly engaged in the delivery of fire/rescue services. Numerous factors have contributed to this increased safety focus; they include:

A. An increase in the personal concerns of firefighters and emergency care personnel about their own health and well being;

B. An increase in the costs associated with occupational illnesses, injuries and deaths;

C. The impact that poor physical fitness has on an emergency responder’s ability to perform his or her job; and,

D. An increase in the regulation of occupational health.

Much of the emphasis on first responder health and safety seems to have come from career fire/rescue departments or combination fire/rescue departments that have a mix of both career and volunteer personnel. Additionally, in those states where Occupational Safety and Health Administration (OSHA) standards apply to municipal workers, the focus on occupational safety has traditionally been stronger.

It is unfortunate, but the volunteer fire/rescue service in many locales has not “kept up with” or embraced this dedication to responder safety, and it shows in the injury and death statistics that are published each year by government agencies and leading fire service organizations. Often times, the leadership of volunteer fire/rescue organizations
HEALTH AND SAFETY

OVERVIEW (continued)

feel that they are exempt from having to comply with the same safety standards that impact a career workforce, and in some cases this is true, but not often.

An emergency incident does not discriminate between what type of emergency responder comes to help, career or volunteer. The hazards and risks are the same, and when responders fail to follow what is considered “best business practice,” they are only placing themselves, and most likely others as well, “in harm’s way.”

Research has repeatedly shown that the physical and mental demands associated with firefighting create conditions that can have an adverse impact on the health and safety of the individual firefighter. Emergency response personnel also come in contact with numerous health hazards such as blood-borne pathogens, carcinogenic substances and temperature extremes. Firefighting has been recognized for many years as one of the most hazardous occupations in the nation, as indicated by the high number of occupational-related injuries and deaths.

A recent United States Fire Administration (USFA) report said, “Firefighting is extremely strenuous physical work and is likely one of the most physically demanding activities that the human body performs.” It is important for all communities that provide fire protection services to remember that the best way to help their citizens in time of crisis is to have a response force physically ready and capable of assisting those persons in need without themselves falling victim.

In the last ten years, over 1,000 firefighters have lost their lives in the line of duty across the United States. According to the USFA, there were 106 firefighter line of duty deaths (LODD) in the United States in 2006, 36 of which occurred while engaged in on-scene, emergency incident operations. While the total number of on-duty deaths represents a slight decrease from the previous year, the long-term trend has not changed much and there remains concern within the nation’s fire service leadership over the “inability” to further reduce the death rate. The recent multiple-LODD tragedy that occurred in Charleston, South Carolina where nine firefighters died, only reinforces this nationwide concern.

Carroll Buracker & Associates, Inc.
HEALTH AND SAFETY

OVERVIEW (continued)

In 2004, Pennsylvania led the nation in firefighter LODDs with 18 deaths. The following year, the Pennsylvania Office of the State Fire Commissioner led by State Fire Commissioner Edward A. Mann, “kicked-off” the “Everyone Goes Homes” campaign as a way to help all fire departments across the state to focus on the safety of all first responders. The campaign was actually part of a national campaign in partnership with the National Fallen Firefighters Foundation (NFFF) and the USFA to address the reduction of firefighter LODDs.

During the press conference at which the Pennsylvania campaign was announced, State Fire Commissioner Mann said, “The time has come for my office to take a more aggressive role to reduce the number of Line of Duty Deaths in Pennsylvania. I may not have the legal authority to require fire departments to comply with national standards but we must use education and training to affect the necessary cultural changes related to firefighter deaths.” Unfortunately, what the Commissioner said was very true. There is very little legal authority over the operation of a fire department in Pennsylvania unless a local municipality or governing body has enacted that authority.

Also in 2004, the NFFF, in conjunction with other major United States fire service organizations, released a document that contained a number of safety initiatives that were to give the fire service “a blueprint for change.” The Firefighter Life Safety Initiatives were as follows:

A. Define and advocate the need for a cultural change within the fire service relating to safety, incorporating leadership, management, supervision, accountability and personal responsibility. Enhance the personal and organizational accountability for health and safety throughout the fire service;

B. Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical and planning responsibilities;
HEALTH AND SAFETY

OVERVIEW (continued)

C. Empower all firefighters to stop unsafe practices;

D. Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all firefighters, based on the duties they are expected to perform;

E. Develop and implement national medical and physical fitness standards that are equally applicable to all firefighters, based on the duties they are expected to perform;

F. Create a national research agenda and data collection system that relate to the initiatives;

G. Utilize available technology wherever it can produce higher levels of health and safety;

H. Thoroughly investigate all firefighter fatalities, injuries, and near misses;

I. Ensure that grant programs support the implementation of safe practices and/or mandate safe practices as an eligibility requirement;

J. Develop and champion national standards for emergency response policies and procedures;

K. Develop and champion national protocols for response to violent events;

L. Provide firefighters and their families access to counseling and psychological support;

M. Provide more public education resources and champion it as a critical fire and life safety program;
HEALTH AND SAFETY

OVERVIEW (continued)

N. Strengthen advocacy for the enforcement of codes and the installation of home fire sprinklers; and,

O. Make safety a primary consideration in the design of apparatus and equipment.

These initiatives were seen by national fire service organizations such as the International Association of Fire Chiefs (IAFC) and the International Association of Fire Fighters (IAFF) as the key elements of a plan to reduce firefighter injuries and deaths. All fire departments, and the municipalities that support those fire departments, were urged to discuss the NFFF initiatives and develop a plan by which they could address how their organization could help improve the safety of all personnel.

According to the most recent USFA report, Firefighter Fatalities in the United States - 2006, stress and over-exertion were again the leading cause of fatal injury, with 54 of the 106 fatalities in 2006 classified as “stress-related” deaths. Also in 2006, 34% of all firefighter deaths occurred on the fire ground and 14% of all firefighter deaths occurred while units (apparatus) were responding to or returning from alarms.

It is important to note that although many LODDs occur in direct relation to the actual incident (building collapse, trapped, falling debris, etc), heart attacks and sudden cardiac events continue to be the leading cause of death, accounting for nearly 50% of all LODDs over the past ten years.

With the leading cause of firefighter deaths consistently being related to health and fitness, it is clear to see why organizations such as the IAFF, the IAFC, and the National Volunteer Fire Council (NVFC) have taken a strong stance on the importance of health and wellness programs for all firefighters. Today, fire service leaders are seeing the significance of a healthy and fit workforce and are striving to implement health and wellness programs in their fire departments. These leaders are putting forth this effort not to rid their departments of “out of shape” or ill firefighters, but to prevent anyone on their firefighting forces from becoming part of a terrible national statistic. In addition, many
HEALTH AND SAFETY

NATIONAL STANDARDS AND REGULATIONS (continued)

political leaders at the local government level are beginning to understand the importance of a healthy emergency response workforce and are starting to provide funding and support for various fire service fitness/wellness initiatives.

NATIONAL STANDARDS AND REGULATIONS

OSHA Regulations

Traditionally, safety and health regulations, whether federal, state, or local, are most often enacted due to a past event or series of past events that have caused death or harm to employees. An example of such an event might be: several workers die while repainting the inside of an empty chemical storage tank (confined space). A follow-up investigation reveals that the workers had little training, had poor safety equipment and had no plan for rescue. Even though the tank was empty, the paint fumes were toxic and all three workers died from chemical asphyxiation.

From that event, and a series of other similar events nationwide, a federal regulation might be enacted to address working in and around confined spaces. In fact, 29 CFR 1910.146 Permit-Required Confined Spaces is an OSHA regulation (standard) that was enacted using that exact type of scenario.

There are numerous OSHA standards that affect private industry throughout the nation. Industry sometimes complains that these federal standards cost millions of dollars in training and equipment just to be in compliance; however, safety professionals realize that compliance with the standards really does improve worker health and safety and that a healthy and safe workforce is a more productive workforce.

One problem with the OSHA standards is that they do not apply to state or local government employees unless a particular state has enacted their own plan that incorporates the federal standards. Currently, there are 26 states that are considered "non-OSHA" states; unfortunately, Pennsylvania is one of them. What this means is that
HEALTH AND SAFETY

NATIONAL STANDARDS AND REGULATIONS (continued)

Pennsylvania state and municipal workers do not have to comply with the same OSHA standards as their private sector counterparts.

As one can see, public sector employees in non-OSHA states can certainly face unsafe working conditions or processes that they have little control over. However, a proactive, "worker-conscious" public sector agency will develop and implement its own safety policies and procedures that address OSHA-type issues even though that agency is exempt from OSHA compliance.


For fire departments in the non-OSHA states, NFPA 1500 has proven to be a very effective document when it comes to first responder health and safety because the standard presents a comprehensive approach to safety for all facets of fire department operations. Many fire departments and municipalities have been able to utilize NFPA 1500 as a tool to implement, fund, and support various health and safety initiatives at the local level of government that otherwise may not have been given consideration because the fire department is located in a non-OSHA state.

National Standards

A "standard" is often thought of as an "accepted practice" that has been developed and recognized by a board of peers in a particular type of industry (industry standards). For example, the Society of Automotive Engineers (SAE) has a standard that addresses automotive lubricating greases (J310). While certainly not a regulation, the SAE standard
HEALTH AND SAFETY

NATIONAL STANDARDS AND REGULATIONS (continued)

is recognized as an industry standard or “best business practice” and should be followed by all parties interested in complying with industry standards. From a customer service perspective, a reputable automotive service facility would only use SAE-approved lubricants when servicing the customer’s vehicle, for that is what the customer would expect.

For the fire service, the industry standards are the NFPA standards. NFPA standards are known as consensus standards and are recognized by fire service professionals worldwide as the “best business practices” for fire service-related issues. Although none of the NFPA standards are regulatory in nature, they carry much of the same importance as a regulation if an issue arises which results in civil litigation.

Because the NFPA standards are recognized by fire service peers as the industry practice, then failing to comply with the NFPA standards is considered a bad business practice which can expose a fire department to unnecessary liability. Therefore, when fiscally possible, it is important for all fire departments to either comply with the NFPA standards, or be in the compliance planning and development process.

Standards and Regulations Compliance in Lower Merion

Unfortunately, the December 2006 line of duty death of Firefighter Thomas J. Hays brings to the forefront the dangerous nature of the fire and rescue service profession. As a member of both the Merion Fire Company of Ardmore and the Narberth Fire Company, Firefighter Hays was described as a very active member who contributed much time and effort to the delivery of fire and rescue services in the Township. He was dedicated to the companies and community that he served.

The preliminary report from the National Institute for Occupational Safety and Health (NIOSH) Fire Fighter Fatality Investigation Team (March 2007) indicates that Firefighter Hays died of a medical emergency at home after returning from fighting a fire at a local restaurant. While the preliminary report does not list any serious safety standard or practice violations, this LODD must serve as a “wake up call” for the LMFD to review all
HEALTH AND SAFETY

NATIONAL STANDARDS AND REGULATIONS (continued)

of its practices, procedures, and guidelines that address or impact the safety of Fire Department personnel.

This LODD did not occur on the fire ground, but this does not imply that all operations of the LMFD are conducted in a safe manner. In fact, the Study Team found a number of significant safety issues involving some or all of the fire companies providing service to the Township, as part of the LMFD. While these findings are not unusual for services provided by small and medium sized volunteer departments in non-OSHA states (career departments as well), the Study Team knows of similar sized departments throughout the nation that operate with a strong focus on safety.

In interviews with various LMFD emergency responders, the Study Team found a general concern over how emergency incidents are handled in each response district. This general concern certainly became the theme of most interviews conducted relating to emergency scene operations—the "seven kings and the seven kingdoms," as many members called it. Emergency incidents appear to be handled differently in the different response districts.

While the Study Team concurs that a strong sense of esprit d' corps is found in most organizations, this same esprit d' corps can be destructive when multiple organizations are required to work together and they let their own organizational culture get in the way. That certainly is what the Study Team has found during its work on this project. Even though there are written LMFD standard operating procedures (SOPs), it is very clear that they seem to be followed on an "as needed basis" by the fire companies. In some cases, they are reportedly not followed at all. Likewise, there appears to be no enforcement of the LMFD SOPs at either the company or department levels.

SOPs are a very important operational component of any fire department; they are integral to incident scene management when multiple companies are expected to operate together. The Study Team believes, as do fire service leaders, that the absence of SOPs or the practice of disregarding existing SOPs is a "recipe for disaster" that will eventually lead to unsafe practices, injuries, and possibly a line of duty death.
HEALTH AND SAFETY

NFPA 1500 (continued)

The recent LMFD LODD should have been the catalyst to improve all aspects of safety within the Department. Unfortunately, the Study Team did not find that to be the case. The fire companies have continued with their individual ways and the Study Team believes that little progress has been made toward improving the overall safety of operations of the LMFD.

The following pages represent the Study Team’s findings and recommendations concerning the LMFD’s compliance with industry safety standards, regulations, and practices. Because the Study Team believes that NFPA 1500 is an all-encompassing safety standard, the Study Team uses that standard as the basis for its evaluation work.

NFPA 1500

Perhaps the most well-known fire service safety standard is NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, 2007 Edition. First issued in 1987, NFPA 1500 was the first national fire service standard to ever address a comprehensive approach to total fire department safety and health programs. The 2007 edition is the most current edition of the standard, which has been revised five times since 1987. Its next revision is due in 2011.

Even though NFPA 1500 is a voluntary consensus standard, it is the accepted industry practice for the fire service and has in many instances been used as an enforcing document when applying safety practices to traditional fire department operations. Senior fire officials all across the United States have used NFPA 1500 to improve the safe operation of their fire departments and to justify to state and local authorities the improvements needed in order to comply with the standard. The Study Team finds that the LMFD complies with some sections of NFPA 1500; however, work is needed in improving all safety programs.

The following is a review of the NFPA 1500 sections in relationship to the operations of the LMFD.
HEALTH AND SAFETY

NFPA 1500 (continued)

Fire Department Administration

The NFPA 1500 standard requires many written documents in the forms of policies, procedures and programs. The purpose of the written documents is to clearly define and communicate all of the department’s safety programs to its personnel. By having established procedures and following those procedures, a fire department is more likely to take a safer approach in all of its operational arenas. This chapter of the standard identifies items such as:

1. Having written policies and standard operating procedures that document the requirements and operations of the department for both the emergent and non-emergent settings;

2. Having a written risk management plan that addresses all facets of the fire department’s operations from scene safety to injury reporting to facility inspections;

3. Having a written occupational safety and health program that identifies specific goals and objectives for the prevention and elimination of accidents and occupational injuries, exposure to communicable disease, illnesses, and fatalities;

4. Ensuring that the department establishes and enforces rules, regulations, and standard operating procedures throughout the department;

5. Developing and implementing an accident investigation program that investigates all accidents, injuries, fatalities, illnesses and exposures as well as the investigation of all accidents involving fire department vehicles, equipment, and facilities;
HEALTH AND SAFETY

NFPA 1500 (continued)

6. Forming an Occupational Health and Safety Committee for the purpose of conducting research, developing recommendations, and reviewing matters related to occupational health and safety within the department;

7. Having a record keeping system that requires the fire department to maintain a database on all accidents, injuries, illnesses, exposures, and deaths that are job related; this record keeping requirement also includes comprehensive health records (confidential), training records, and vehicle and equipment maintenance records;

8. Appointing a Health and Safety Officer for the fire department in compliance with NFPA 1521, Standard for Fire Department Safety Officer. The responsibilities of the Health and Safety Officer are many, and they all relate to the communication and management of the department’s risk management plan;

9. Having the Health and Safety Officer ensure that all members of the department receive safety-related training for all aspects of their assigned duties and responsibilities; ensure that all accident and injury investigations are completed; ensure that safety supervision is provided at all training exercises and that all live fire training events are done in compliance with NFPA 1403, Standard on Live Fire Training Evolutions; and ensure that health and safety training programs and information are provided to the members of the department;

10. Having the department’s Health and Safety Officer be responsible for managing an accident and injury prevention program that includes items such as the evaluation of safe work practices in both the emergent and non-emergent settings, the training and certification of all fire department apparatus driver and operators (NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications), the implementation of an accident and injury reporting system that accurately reflects causes and
HEALTH AND SAFETY

NFPA 1500 (continued)

corrective actions, and the conducting of periodic facility inspections to ensure that workplaces are hazard-free for the employees; and,

11. Having the department’s Health and Safety Officer responsible for ensuring that injury and accident data is gathered in a correct and useful manner and responsible for issuing an annual report to fire department senior staff on the accidents, injuries, and exposures that occurred in the department.

LMFD SOP No. 5

The LMFD SOP No. 5, Health and Safety Standard, addresses the majority of sections of the current edition of NFPA 1500. The seventeen-page SOP is fairly comprehensive and provides direction to the individual companies on most matters of member safety and health. However, the Study Team found little evidence that this SOP was being followed or enforced on any consistent basis throughout the Department. This is just one example of the discussion that occurred previously in this Chapter about the non-compliance with LMFD SOPs.

Neither the LMFD nor the fire companies in the LMFD have an NFPA 1500-compliant written risk management plan. While this is not unusual for small volunteer fire/rescue organizations, the Study Team recommends that all of the companies utilize the results of the Study Team’s work to create a written risk management plan. Likewise, none of the fire companies have a written occupational safety and health policy, or an occupational safety and health program that complies with NFPA 1500.

The Study Team suggests that the LMFD revise SOP No. 5, Health and Safety Standard, so that it complies with the current edition of NFPA 1500. The Study Team also encourages the LMFD to begin immediate enforcement of the revised SOP No. 5 and that the fire companies implement all actions needed to comply with the revised SOP.

The LMFD does not comply with the accident and injury investigation requirements of NFPA 1500. The individual companies do not have clear or consistent written policies on
HEALTH AND SAFETY

NFPA 1500 (continued)

injury or vehicle accident reporting, nor do they have an adequate, formal policy on the investigation of such incidents. In order for a department to fully understand its own safety record, adequate data must be reported and collected, and all incidents must be investigated.

Accident and Injury Investigation

Based upon the information provided to the Study Team during interviews, the frequency of injuries and collisions within the LMFD has been low over the last three years. The LMFD should be commended for having so few injuries and collisions; however, this does not relieve the department from having a more comprehensive investigation and reporting process.

It also should be noted that the Township provides worker’s compensation coverage for the paid and volunteer staff of each fire company, except the Narberth Fire Company. (Narberth Fire Company members receive their worker’s compensation coverage through the Borough of Narberth.) Because the worker’s compensation benefit is provided to the LMFD companies, a limited amount of reporting and investigative work is completed. However, it was unclear to the Study Team the exact nature of that investigative process, who is involved in the process and what have been the associated outcomes of the process.

The Study Team recommends that the LMFD immediately develop and implement an injury reporting and investigation program that meets the requirements of NFPA 1500 and that requires compliance by all companies (except Narberth Fire Company) in order to receive worker’s compensation coverage.

The Study Team also recommends that the LMFD immediately implement a vehicle collision reporting and investigation process that does the same thing for vehicle collisions; again, the Narberth Fire Company should voluntarily participate in this reporting and investigation process so that data collection and analysis can be consistent in the LMFD.
HEALTH AND SAFETY

NFPA 1500 (continued)

Health and Safety Committee

One important requirement of NFPA 1500 is the creation of an occupational health and safety committee. The purpose of such a committee is to review safety issues within a department, and develop recommendations and plans concerning those safety concerns. Even though LMFD SOP No. 5 requires that a safety and health committee be established, the Study Team knows of no such committee in any of the seven fire companies that complies with NFPA 1500. Again, the Study Team considers it important to note that the lack of an occupational safety and health committee is not unusual in small, volunteer organizations, but it does not mean that one is not necessary.

Because occupational health and safety issues affect all fire/rescue responders regardless of affiliation, the Study Team recommends that the LMFD immediately create a joint health and safety committee with representatives from all seven companies, the paid firefighters, and a representative from the Township's insurance department. This joint health and safety committee should meet on a regularly scheduled basis (at least monthly during the first year of implementation) to discuss and take action on safety-related items affecting the companies, including the immediate revision of LMFD SOP No. 5.

Health and Safety Officers

An important position in any modern fire department is the position of health and safety officer. None of the seven companies has an NFPA-compliant health and safety officer. All of the fire companies appear to utilize a safety officer "position" as part of their incident scene management operations. However, the frequency with which that function occurs was unclear to the Study Team, for there was a significant variance in operational procedures between the individual fire companies. LMFD SOP No. 5 requires the appointment of a "fire company safety officer" by each fire chief of each LMFD company. The Study Team found little evidence of compliance with this requirement.

Concerning emergency incidents, interviews conducted by the Study Team revealed an uncertainty about the use of an incident safety officer (ISO) at emergency incidents.
HEALTH AND SAFETY

NFPA 1500 (continued)

LMFD SOP No. 25, Fire Ground Safety Officer, requires the incident commander to designate someone to serve as a safety officer at “all fire or emergency incidents to which members or companies from the Lower Merion Fire Department are engaged in the performance of their duties.” It appears that the use of an ISO is inconsistent between the fire companies and that only a few members of the entire LMFD have completed Incident Scene Safety Officer training.

The Study Team recommends that the LMFD appoint one person as the LMFD health and safety officer. That person should be trained and given full authority to act on all health and safety matters as described in NFPA 1500. In addition, the LMFD health and safety officer should serve as the chairperson of the LMFD health and safety committee.

The Study Team also encourages that each fire company be required to appoint a health and safety officer that is trained and given full authority to act at the company level on health and safety matters as described in NFPA 1500 and LMFD SOP No. 5.

Health and Safety Training

Currently, there is minimal health and safety training (as defined in NFPA 1500) conducted at the fire companies. Any health and safety training completed by the fire companies is most often the result of company-level drills or individual attendance at training courses. With the appointment of a health and safety officer at each company and with the oversight of the LMFD health and safety officer, the Study Team expects the companies’ health and safety training to improve significantly.

Accident and Injury Prevention Program

The LMFD does not have a written accident or injury prevention program other than as stated in SOP No. 5, Brigade List, or SOP No. 8, and Injury Procedure. Neither SOP meets the requirement of NFPA 1500. The LMFD needs to have a comprehensive, written vehicle collision reporting policy that addresses all aspects of emergency vehicle
HEALTH AND SAFETY

NFPA 1500 (continued)

collisions including: driver training and certification, report writing, post-collision drug and alcohol screening, and driver remedial training. The same is true for on-duty injuries.

The Study Team recommends that the LMFD develop and implement an NFPA 1500-compliant, comprehensive collision and injury prevention program that ensures the following: problem identification, injury and collision prevention training, and injury/collision investigation. The Study Team recommends that the LMFD health and safety committee serve as the lead committee in the development of this program.

Training and Education

In terms of training and education, NFPA 1500 requires that the “fire department establish and maintain a training and education program with a goal of preventing occupational deaths, injuries, and illnesses.” The standard requires that all personnel be trained in the duties and responsibilities which they are expected to perform and that the training be in compliance with recognized standards. Other requirements identified in this chapter or NFPA 1500 include:

1. Having all members who engage in firefighting activities trained to meet the requirements of NFPA 1001, Standard for Fire Fighter Professional Qualifications;

2. Having all apparatus driver/operators meet the requirements of NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications;

3. Having all personnel required to perform technical rescue operations meet the requirements of NFPA 1006, Standard for Rescue Technician Professional Qualifications;

4. Having all officers (company and chief) meet the requirements of NFPA 1021, Standard for Fire Officer Professional Qualifications;
HEALTH AND SAFETY

NFPA 1500 (continued)

5. Having all personnel who respond to hazardous materials incidents meet the operational requirements of NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents;

6. Having all personnel trained in accordance with the guidelines established in NFPA 1581, Standard on Fire Department Infection Control Program;

7. Ensuring that all training exercises are conducted under the supervision of a qualified instructor;

8. Ensuring that all personnel are trained in the use and care of their personal protective clothing and equipment;

9. Implementing a recurring training program that is based on a proficiency cycle with the goal of preventing the degradation of skills;

10. Providing training and education activities that are needed to support the certifications of the department’s personnel;

11. Ensuring that all personnel practice assigned skill sets on a regularly scheduled basis; and,

12. Ensuring that all respiratory protection training is conducted in accordance with NFPA 1404, Standard for Fire Service Respiratory Protection.

Basically, NFPA 1500 requires that a fire department has a response force that is trained in accordance with national standards, that is given ample opportunity to practice their skills in training exercises, and that is expected to maintain the level of proficiency needed to perform their job safely and effectively.
HEALTH AND SAFETY

NFPA 1500 (continued)

As described in this study’s chapter on training, there is much variance in the levels of member training and certification between the LMFD’s seven fire companies. The Study Team found variances at all ranks and all levels of service.

The Study Team recommends a complete and thorough overhaul of the LMFD training program, to include the implementation and emphasis on certification-based training. This overhaul must include the development and implementation of a thorough and effective in-service training program—all in compliance with NFPA 1500. This recommendation includes the elimination of the practice of “grandfathering” members who have not met training requirements and includes the creation of minimum training requirements for all officer ranks.

The Study Team recommends that all chief officers be certified to the Fire Officer II level (NFPA 1021) and complete ICS 300 level training (NIMS). The Study Team also recommends that all captains and lieutenants be certified to the Fire Officer I level (NFPA 1021) and complete ICS 200 level training (NIMS).

Fire Apparatus, Equipment, and Driver/Operators

NFPA 1500 addresses many areas related to the design, selection, and use of fire department apparatus and equipment; the standard also addresses the training requirements of driver/operators. This section of the standard “considers health and safety as the primary concern in the design, construction, acquisition, operation, maintenance, inspection, and repair of all fire department apparatus and equipment.” Items addressed in this section of the standard include:

1. Ensuring that all new fire department apparatus meets the requirements set forth in NFPA 1901, Standard for Automotive Fire Apparatus;

2. Ensuring that all fire department apparatus that is refurbished meets the requirements of NFPA 1912, Standard for Fire Apparatus Refurbishing;
HEALTH AND SAFETY

NFPA 1500 (continued)

3. Ensuring that all apparatus is operated by personnel who have successfully completed an approved driver training program (NFPA 1451, Standard for a Fire Service Vehicle Operator Training Program);

4. Having established response guidelines in the form of written and enforceable operating procedures;

5. Ensuring that all personnel use seat belts and other passenger restraint devices;

6. Having an established procedure for vehicle inspection, at least on a weekly basis, but within 24 hours of last use;

7. Having an established inspection and preventive maintenance program that meets the requirements of NFPA 1915, Standard for Fire Apparatus Preventive Maintenance Program; and,

8. Ensuring that all pumps, aerial devices, fire hoses, and ground ladders are tested annually in accordance with their corresponding NFPA standards.

This list shows that almost every aspect of fire apparatus and equipment design, use, and maintenance is addressed by at least one NFPA standard. In the case of the LMFD, the Study Team finds that all companies do a good job of maintaining their apparatus fleet and they are to be commended for their efforts. The Study Team learned of no safety concerns related to the condition of the current apparatus fleet. The same was true concerning the equipment carried on the apparatus.

In terms of the LMFD’s compliance with this section of NFPA 1500, there were only two deficiencies noted. First, the Study Team found that at least one of the LMFD companies still permits firefighters to ride on the tailboard of the apparatus. This practice has long been recognized as dangerous, is considered “backward” by most fire service safety professionals today, and has been prohibited in the safety standards for over 15 years.
HEALTH AND SAFETY

NFPA 1500 (continued)

The Study Team observed this practice first hand. While all members riding on the tailboard were required to use a restraint device, the practice is considered unacceptable by today’s safety standards. If additional personnel are needed at an emergency scene, then some other, safer means must be used for that transport. Many departments that are faced with the dilemma of having older apparatus with limited seating use light trucks or SUVs to transport additional staff. The Study Team recommends that the LMFD immediately cease the practice of permitting members to ride the tailboard of emergency apparatus.

Related to the tailboard riding, the Study Team also found that in LMFD SOP No. 9, Safe Operation of Vehicles and Apparatus (updated August 2005), “members may safely ride sitting or kneeling on the hose bed or inside the main ladder in the turntable area if all interior seating is taken.” While the Study Team did not observe this practice, it is very disconcerting that the wording currently exists in a fire department policy. The Study Team believes this practice to be archaic and in direct opposition to all recognized safety practices in the fire service today. The Study Team recommends that the LMFD immediately revise the SOP to prohibit the practice of permitting members to ride in the hose bed or on the main ladder of emergency apparatus.

The second deficiency found in this particular section of the standard involves the driver training programs of the LMFD fire companies. These deficiencies are noted in greater detail in the Study’s training chapter and basically involve the non-compliance of the programs/practices with NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications. The Study Team recommends that the LMFD develop and implement a driver training program that is NFPA 1002 compliant and that is used by all LMFD fire companies.

Protective Clothing and Equipment

One of the most comprehensive portions of the NFPA 1500 standard is the chapter on personal protective clothing and equipment. The primary focus of the protective equipment chapter is to ensure that each firefighter is provided with safe, protective
HEALTH AND SAFETY

NFPA 1500 (continued)

clothing and equipment and that the clothing and equipment is cleaned and maintained on a regular basis in accordance with recommended practices. Items identified in this chapter include:

1. Ensuring that each firefighter is provided the protective clothing and equipment needed for the hazards to which he is expected to be exposed;

2. Ensuring that a written protective clothing and equipment use policy and program are in place and enforced by the department;

3. Ensuring that all structural firefighting protective clothing is cleaned at least once every six months in accordance with NFPA 1851, Standard on the Selection, Care, and Maintenance of Structural Firefighting Protective Ensembles;

4. Having all station/work uniforms comply with NFPA 1975, Standard on Station/Work Uniforms for Fire and Emergency Services;

5. Having all structural firefighting clothing design and manufacturing comply with NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting;

6. Having a written, protective clothing and equipment inspection and maintenance program;

7. Ensuring that all EMS providers are provided with adequate protective clothing and equipment to reduce the likelihood of exposure to blood-borne and airborne diseases;

8. Ensuring that all hazardous materials incident responders are provided adequate protective clothing and equipment to protect them from the known chemical hazards;
HEALTH AND SAFETY

NFPA 1500 (continued)

9. Having a written, hazardous materials protective clothing and equipment inspection and maintenance program;

10. Having a written, respiratory protection program that addresses the selection, safe use, care, maintenance, and air quality of respiratory protection devices;

11. Having a written standard operating procedure for the use of respiratory protection equipment;

12. Ensuring that all personnel receive annual training and recertification on the use of respiratory protection equipment;

13. Ensuring that adequate breathing air (quality and quantity) exists for the recharging of respiratory protection equipment (NFPA 1989, Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection);

14. Ensuring that all self-contained breathing apparatus (SCBA) meet the requirements of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service;

15. Ensuring that all personnel receive an annual face piece fit test;

16. Ensuring that all SCBA are equipped with a functional personal alert safety system (PASS) device;

17. Ensuring that all life safety rescue ropes are selected, used, maintained, and stored in accordance with NFPA 1983, Standard on Fire Service Life Safety Rope ad System Components; and,
HEALTH AND SAFETY

NFPA 1500 (continued)

18. Ensuring that all personnel are provided eye protection and hearing protection devices that meet applicable design standards.

Cleaning and Repairing Protective Clothing

When reviewing compliance with this part of the NFPA 1500 standard, the Study Team noted a few areas of deficiency throughout the LMFD. The first deficiency was related to the regularly scheduled cleaning of the structural firefighting protective clothing ensemble. The Study Team found minimal, NFPA-compliant written policies or procedures concerning the cleaning of protective clothing. Again, this is not unusual for small organizations because the gear may not get used that often and the need for cleaning and repair does not always appear obvious.

Fortunately, the Study Team found that each company does clean and repair their member’s personnel protective clothing, and that the cleaning and repair costs are paid for through relief association funding. It was unclear as to the frequency of the cleaning process, but it should be noted that, with the exception of the Narberth Fire Company, the Study Team saw no evidence of protective clothing in disrepair at any fire company.

The Narberth Fire Company does not receive the same amount of funding from their relief association as the other six LMFD fire companies do from theirs. The Narberth Fire Company protective clothing appeared older and had a more worn appearance, yet the Study Team saw no evidence of any immediate safety issues involving Narberth’s protective clothing.

The Study Team recommends that the LMFD develop and implement a protective clothing cleaning and maintenance program that complies with NFPA 1851, Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protection Ensembles, and that the Narberth Fire Company be included in this program and receive supplemental funding from the proposed combined Lower Merion/Narberth Narberth Fire Company’s Relief Association.
HEALTH AND SAFETY

NFPA 1500 (continued)

It should be noted that the Narberth Fire Company has a first-response district that includes area outside of Narberth Borough. Reportedly, a large percentage of Narberth Fire Company’s calls are in Lower Merion Township and outside of the Borough, yet the fire company receives no funding from the Township.

Respiratory Protection Program

A second area of deficiency concerning this part of the NFPA 1500 standard is the failure to have a formal, written respiratory protection program. Apparently, there are limited policies at the LMFD fire companies that address the use of self-contained breathing apparatus (SCBA). The policies varied among the companies and generally did not meet the requirements of a written respiratory protection program as required by OSHA or NFPA.

While a section of LMFD SOP No. 5, Health and Safety Standard, addresses SCBA and its use, interviews with department staff and station visits suggest that the fire companies do not follow the SOP.

One very important component of a respiratory protection program is the annual fit testing of personnel for the use of respiratory protection face pieces. In the fall of 2006, a major switchover of SCBA occurred in the LMFD and all companies (except the Narberth Fire Company) were outfitted with the same make and model of SCBA which was purchased using Relief Association funding. (The Narberth Fire Company does not utilize precisely the same SCBA in that theirs does not include the rescue harness component.)

The Study Team commends the efforts of the LMFD and the Relief Association toward the standardization of SCBA because it is important for companies that are expected to work together to be equipped in a similar fashion. Interoperability of equipment on the fire ground is critical, and the ability for everyone to operate with the same model of SCBA is important to the overall safety of the operation.
HEALTH AND SAFETY

NFPA 1500 (continued)

Along with the changeover to the new SCBA came face piece fit testing for each member who was approved to wear respiratory protection equipment. The Study Team noted that before the purchase of the new SCBA, face piece fit testing was performed on an inconsistent basis even though LMFD SOP No. 5 requires it be done annually. As the LMFD approaches the one year anniversary of the new SCBA implementation, it will be important to ensure that all members receive and complete the annual fit test.

One commonly unpopular requirement of the OSHA respiratory protection standard in both the public and private sectors is the requirement for an SCBA wearer to be clean-shaven: basically, no facial hair can be present where the face piece seal touches the wearer’s skin. This particular requirement has become a very emotional issue in many locales, however, the standard is clear about the requirement and the Study Team supports the standard as it is written.

The Study Team found that the LMFD fire companies appear to permit members to have facial hair while wearing SCBA. This was evident during interviews and station visits and when viewing numerous photographs of fire ground operations involving LMFD fire company personnel. LMFD SOP No. 5 clearly states that “beards or facial hair that interfere with the face piece seal shall be prohibited for members required to use SCBA.” Yet, the practice continues. In fact, during several interview sessions with company memberships, the topic of facial hair was brought up and members stated that one reason they had joined a particular LMFD fire company was that the company allowed “goatees.”

The Study Team suggests that the LMFD implement and enforce a “no facial hair” (except limited, mustaches) policy for members approved to wear SCBA.

Medical Evaluations

Another important component of an OSHA-compliant respiratory protection program is the medical evaluation of members prior to being authorized to wear and use SCBA. All of the LMFD fire companies except Narberth Fire Company provide some type of
HEALTH AND SAFETY

NFPA 1500 (continued)

medical evaluation for their members. Those evaluations are paid for through the Relief Association. LMFD SOP No. 5 states that “all members using SCBA shall be medically certified by a physician on an annual basis.” Interviews conducted by the Study Team produced mixed results on the annual medical evaluations and it was unclear to the Study Team if those medical evaluations are used to clear members for SCBA use.

The Study Team recommends that the LMFD, through the recommended health and safety committee, develop and implement a written, respiratory protection program that includes the use, maintenance, and repair of SCBA as well as annual training and recertification for personnel. This respiratory protection program must also include annual face piece fit testing and annual medical evaluations for all personnel expected to use SCBA (29 CFR 1910.134 Respiratory Protection). If needed, this program should include supplemental funding to the Narberth Fire Company so that their members can also receive annual medical evaluations for SCBA use.

Another area of concern relating to respiratory protection is the replenishment of breathing air, both on the fire ground and in the fire stations. The Study Team found that with the recent acquisition and implementation of the new high pressure SCBA came the problem of not being able to refill those units efficiently using the existing LMFD breathing air cascade and compressor systems.

Each of the LMFD fire companies has a means by which to store breathing air at their station and refill empty SCBA cylinders, however, in most cases those refilling systems have difficulty achieving the higher, “top end” pressures required of the new SCBA cylinders; thus. “topping off” those cylinders has become a problem. This problem is further compounded by the fact the only mobile air unit in the Township is Gladwyne Fire Company’s air and light unit (Air/Light 24), which is a 21-year-old rig that is equipped with an air compressor that cannot efficiently fill the newer SCBA cylinders.

Reportedly, replacement of Air 24 has been under consideration for a number of years. Apparently, several justification and specification documents have been submitted to the LMFD by the Gladwyne Fire Company.
HEALTH AND SAFETY

NFPA 1500 (continued)

The Study Team considers the air/light unit important to the support of breathing air and lighting for the LMFD and therefore suggests that the unit be replaced as soon as possible with a similar air/light unit that has sufficient breathing air compressor and storage capacity to meet the demands of the new LMFD SCBA units.

Emergency Operations

NFPA 1500 provides much direction in the area of incident scene management. The goal of the standard is to provide a safe, organized approach to mitigating all emergencies with the intent of utilizing resources in an effective and efficient manner using an incident management system that meets the requirements of NFPA 1561, Standard on Emergency Services Incident Management System. Items addressed in this section of the standard include:

1. Creating and using an incident action plan during the mitigation of all emergencies;

2. Dividing the management of an incident into tactical-level management components that maintain an effective span of control;

3. Implementing an accountability system that keeps track of all personnel working on the incident scene;

4. Ensuring that dispatch and radio communications are effective and uncomplicated, and that emergency procedures are clearly identified;

5. Ensuring that risk management occurs at each emergency scene so that the risks taken are appropriate for the benefits acquired;

6. Providing that a written accountability procedure is in place and that all personnel follow the procedure on a regular basis;
HEALTH AND SAFETY

NFPA 1500 (continued)

7. Ensuring that adequate staffing is present on-scene to initiate a safe and effective fire attack (NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, 2004 Ed.);

8. Ensuring that all personnel working in a hazardous environment work in teams of two and that no one ever works alone;

9. Ensuring that before entry is made into a hazardous atmosphere, a "standby" or initial rapid intervention company made up of two personnel is available and in position to effect the rescue of firefighters entering the atmosphere (2-in/2-out policy);

10. Establishing a designated rapid intervention company for the rescue of fire department personnel, as the incident grows and additional resources arrive on-scene;

11. Having a written procedure for the rehabilitation of all personnel at incident scenes; and,

12. Having a written post-incident analysis procedure that requires the written review of all major incidents including major property losses, civilian deaths, significant firefighter injuries, and firefighter deaths. All post-incident analyses must be made available to all fire department personnel.

Regarding emergency operations, the LMFD has several written SOPs on emergency response operations. The Study Team noted that the SOPs are not consistently followed by the individual fire companies and that fire ground operations vary between response districts. In fact, a common thread in many of the Study Team's interviews was the concern expressed by members over the differences in how incidents are managed in the various districts of the Township.
HEALTH AND SAFETY

NFPA 1500 (continued)

The overwhelming theme to those differences was inconsistencies in the command and control of emergency incidents. While the Study Team has no “hard” data concerning that common theme, it seems an important issue to identify because it was a frequent topic of discussion in interviews and because the lack of command and control at emergency incidents is often cited by NIOSH as one of the leading contributing factors to fire ground line of duty injuries and deaths.

The following could correct this apparent shortcoming:

1. Implementing consistent command officer training that requires all chief officers to be certified to the Fire Officer II level (NFPA 1021) and ICS 300 level (NIMS);

2. Developing and implementing response and mutual aid policies and procedures so that service delivery throughout the Township is consistent; and,

3. Discontinuing the practice of permitting the individual companies to develop their own response and incident management SOPs and thereby enforcing all LMFD SOPs.

2-In /2-Out

The LMFD fire companies are inconsistent in their practices regarding the protection (and rescue) of the initial arriving fire company personnel. The standard practice in today’s fire service is that no one operates alone in a hazardous environment unless a known civilian rescue exists; an initial team of firefighters should not enter a hazardous atmosphere until a standby rescue team is available and in direct communication with them (2-in/2-out policy).

While 2-in/2-out has been greatly debated throughout the fire service, it is the recommended business practice and is part of OSHA 29 CFR 1910.134 Respiratory
HEALTH AND SAFETY

NFPA 1500 (continued)

Protection. The Study Team fully supports the 2-in/2-out standard and has great concern over the present manner in which the LMFD fire companies engage in firefighting operations, especially during the times of reduced staffing.

LMFD SOP No. 5 only briefly addresses the issue of initial crew protection. The SOP states, “When members are involved in operations that require the use of SCBA or other respiratory protection equipment, at least one member shall be assigned to remain outside the area where respiratory protection is required. This member shall be responsible for maintaining a constant awareness of the number and identity of personnel using SCBA, their location and function, and time of entry.” The Study Team believes that this section of LMFD SOP No. 5 does not meet the requirement of NFPA 1500 or of the 2-in/2-out rule.

In addition, the practice of responding with only one or two firefighters on an engine or ladder truck establishes a scenario for trouble before units even arrive on the scene. When companies elect to engage in an interior fire attack, there must be adequate resources on-scene to provide backup support and rescue should that first attack crew encounter trouble. The Study Team understands that all of the LMFD fire companies engage the use of firefighter assistance and search teams (FAST/RIT); however, those teams are not in place immediately upon arrival of the initial units.

Presently, LMFD SOP No. 23, FAST Team Response Procedures, requires the dispatch of the fifth due company on a particular alarm assignment to be sent as the FAST. The Study Team believes that if a FAST is needed because of a “working incident,” the FAST should arrive in a timely manner and the practice of using the fifth due company does not allow for that timely response.

Reportedly, all LMFD fire companies engage the use of FAST crews at working structure fire incidents; however, there is an inconsistency between how those teams are used. In terms of traditional fire department operations, FAST is synonymous with RIT or rapid intervention team. The purpose of a FAST crew is to ensure that there is a dedicated team
HEALTH AND SAFETY

NFPA 1500 (continued)

of properly trained and equipped firefighters on the scene at working incidents whose sole responsibility is to rescue any downed or trapped firefighters, should that need arise.

History has repeatedly shown that when a firefighter becomes trapped in a structure fire, it takes an entire team of individuals to locate and remove that trapped firefighter. History has also shown that when FAST or RIT crews are not used, the outcome for the trapped firefighters is often bleak. The recognized practice in today’s fire departments is the consistent use of FASTs and RITs to help ensure firefighter safety on the incident scene.

During the Study Team’s interviews it became apparent that the use of the FASTs can differ between response districts in the Township. Even though a FAST is automatically dispatched to a working structure fire in the Township, the Study Team encountered many varying accounts of how the teams were used. The Study Team received reports of cases where the FASTs were ignored on some incidents because of “inter-company” rivalry and dislikes. This is an unacceptable practice that does nothing but further endanger the emergency responder.

The LMFD should develop and implement a FAST SOP that addresses the establishment of an initial 2-out crew (standby team) and then transitions to FAST implementation. This SOP should also include moving the FAST “up” in the dispatch order to at least the fourth due company. Finally, this SOP must clearly outline the use of FAST in a consistent manner for all incidents regardless of location in the Township or Borough.

On-Scene Personnel Accountability

Another area of concern raised to the Study Team during the interview process was the apparent inconsistency in how the fire companies use their personnel accountability systems. The purpose of an accountability system is to document and manage who is present on the incident scene. There are a number of different accountability systems in use throughout the United States today but they all basically function the same: they keep track of where individual companies and firefighters are operating on the incident scene. Should a MAYDAY situation occur, then the incident commander can refer to the
HEALTH AND SAFETY

NFPA 1500 (continued)

accountability system (board or other tracking device) to quickly determine who is involved in the MAYDAY. As with the 2-out procedure and the FAST procedure, an accountability system and procedure are paramount to firefighter safety.

There seems to be no standard personnel accountability system in use in Lower Merion Township, despite the fact that its need has been discussed on a number of occasions and the CFO has reportedly requested the fire company chiefs propose a consistent approach. This lack of a standard accountability system in the LMFD was a significant concern to many members. The Study Team also found that, in most cases, each company felt that their accountability system worked; it was when they responded with other companies that the issues arose.

Reportedly, the County chiefs are developing a “two tag” guideline approach for use. The LMFD should implement a standardized accountability system that is used by all companies on a consistent basis at every emergency incident, preferably one that is consistent with the County developed system. The Study Team suggests that the recommended health and safety committee take the lead in developing this system.

Radio System

Another safety issue that was brought to the attention of the Study Team under this section of NFPA 1500 is the LMFD radio system. It was made very clear to the Study Team during its interview sessions that the performance of the current radio system is a very passionate topic throughout the department and that radio interoperability is a very real safety issue.

One example of a safety issue with the current radio system is that the portable radios have an “emergency button” feature that is non-operational. The emergency button is designed for firefighter use during a MAYDAY scenario so that the dispatcher and incident commander can be made aware that a firefighter is in trouble. This is one example of the safety concerns with the existing radio system.
HEALTH AND SAFETY

NFPA 1500 (continued)

The topics of communications and radio system operations are discussed in another chapter of this report, and the Study Team suggests that the LMFD health and safety committee review all communications and radio system recommendations for inclusion in health and safety SOP development and implementation.

Post Incident Analysis

The final issue concerning this part of the NFPA 1500 standard is the lack of written post incident analyses (PIA) conducted by the LMFD. A PIA is an important tool in evaluating the operation of emergency response services. A PIA is not a disciplinary tool or a tool to find fault; it is a process by which a significant event is dissected and analyzed so that operational procedures can be validated and possibly improved.

A PIA plays an important role in a department’s self-evaluation and growth. Without a formal open PIA process, rumors can abound, false accusations can be generated, and a general distrust of other agencies can grow. The LMFD should develop and implement a Post Incident Analysis policy and procedure that is used for all significant fire/rescue incidents that occur within the Township and Borough. (The LMFD can determine the definition of “significant:” it should include multiple alarm fires, fires involving deaths and/or serious injuries, mass casualty incidents, etc.).

Facility Safety

This part of the standard addresses the safe operation of fire department facilities. The goal is to ensure that all fire department personnel have a clean and safe environment in which to perform their non-emergency duties and responsibilities. Items included in this Chapter and NFPA 1500 are:

1. Ensuring that all fire department facilities comply with all legal, health, safety, building, and fire code requirements;
HEALTH AND SAFETY

NFPA 1500 (continued)

2. Ensuring that all fire stations have adequate facilities for disinfecting, cleaning, and storing various items in accordance with NFPA 1581, Standard on Fire Department Infection Control Program;

3. Ensuring that work sites have in place adequate fire and life safety protection systems, such as smoke detectors, fire alarm systems, carbon monoxide detectors, and automatic sprinkler system; and,

4. Having a written procedure and program for the annual inspection of all work sites.

From a facility safety perspective, the Study Team noted that all LMFD fire company facilities appear to be in very good condition. Of the three parts of an emergency response organization—people, equipment, and facilities—facilities can often be a challenge due to their constant requirement for maintenance and upkeep. The Study Team was impressed by the fact that all of the stations had vehicle exhaust removal systems and were protected by automatic sprinkler systems—this is uncommon in much of the volunteer fire service today. The Township, LMFD, its seven companies, and the two relief associations are commended for their efforts in keeping their facilities safe and functional.

One facility-related safety item that was brought to the Study Team’s attention is the need for a traffic control system at the Union Fire Association station on Montgomery Avenue. The station is situated on a busy thoroughfare and members reported great difficulty in merging into traffic when responding to calls, and stopping traffic when returning to the station. The Study Team witnessed the traffic load on at least three occasions at the station and concurs that a traffic control device is needed to improve the overall safety of responding and returning units.

The LMFD should work with the Township (or Commonwealth if needed) to install a traffic control device on Montgomery Avenue in front of the Union Fire Station so that traffic can be stopped during times of apparatus response and return.
HEALTH AND SAFETY

NFPA 1500 (continued)

One final safety issue related to fire station facilities is the presence of alcoholic beverages. It is well known that many volunteer fire departments in the United States started out as quasi social clubs and that the presence of alcohol has been accepted in many fire stations for many years. However, the Study Team, and most fire service leaders, do not condone the practice and expect all fire departments to prohibit the practice. The Study Team believes that there is absolutely no acceptable justification for the presence of alcohol in any emergency response facility.

The Study Team observed firsthand and learned through interviews that alcohol is permitted to be consumed on the premises of several of the LMFD fire companies. The Study Team understands that in the companies where this was observed it has been longstanding practice. The Study Team was assured by fire company leaders that consumption is not excessive and that members are not permitted to respond after consuming alcohol. The Study Team believes, however, that the mere presence of alcohol is a bad business practice and may place everyone in danger. Most of the LMFD fire companies spoke of their family-oriented atmosphere; alcohol should not be part of that atmosphere.

The Study Team recommends that the LMFD and the fire companies immediately prohibit alcohol consumption on all LMFD fire company premises and that those companies failing to do so have their Township funding withheld pending compliance.

Further, many fire stations across the U.S. are implementing a “no smoking” policy inside their buildings. This is due primarily because of the concern regarding the impact of both cigarette smoking and smoke from the product of building and other fire combustion on the lungs of firefighters. Likewise, a similar policy should be considered for Lower Merion fire stations.

Medical and Physical Requirements

An important feature of any firefighting force is the health and well-being of the firefighters. NFPA 1500 clearly identifies several key areas of health and wellness that
HEALTH AND SAFETY

NFPA 1500 (continued)

directly impact the ability of firefighting forces to perform their duties. This chapter addresses health areas such as:

1. Ensuring that all candidates and active personnel meet the medical requirements of NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments;

2. Ensuring that all personnel receive annual medical certification for the use of SCBA;

3. Ensuring that all personnel receive a physical performance evaluation in accordance with NFPA 1583, Standard on Health-Related Fitness Program for Fire Fighters;

4. Having an established health and fitness program for all personnel in accordance with NFPA 1583, Standard on Health-Related Fitness Program for Fire Fighters;

5. Having a confidential and permanent, personal health file maintained on each firefighter that includes the results of all physical and medical evaluations, a history of all occupational injury and illnesses, and an accounting of all hazardous materials and communicable disease exposures; and,

6. Ensuring that the department has a written infection control program in accordance with NFPA 1581, Standard on Fire Department Infection Control Program.

The LMFD companies, except Narberth Fire Company, seem to provide some level of medical evaluation and all companies provide some fitness opportunity to their members. The Study Team considers this access to medical evaluation and fitness important to maintaining a healthy and safe response force. In fact, in an effort to help improve the overall health and wellness of the volunteer fire services in the United States, the National
HEALTH AND SAFETY

NFPA 1500 (continued)

Volunteer Fire Council (NVFC) in conjunction with the United States Fire Administration (USFA) released the *Health and Wellness Guide for the Volunteer Fire Service* in 2004.

The guide identified five basic components of a health and wellness program for a volunteer fire department, including: regular fitness screenings and medical assessments, a fitness program, a behavior modification program, a program to educate a department’s membership, and a program to screen volunteer applicants for pre-existing medical conditions.

Unfortunately today, health and wellness in the volunteer fire/rescue service is still far behind that of the career fire/rescue service, perhaps because of a sense that an organization cannot tell a volunteer “what to do.” But when it comes to health and wellness, and given the fact that stress and cardiovascular events are the leading cause of firefighter deaths every year, the leadership of volunteer fire/rescue organizations must realize that they have a responsibility to ensure that their members are medically capable of performing the work required of them.

There seems to be inconsistency amongst the fire companies concerning the frequency and type of medical evaluations completed on their members. The Study Team suggests that the LMFD, in conjunction with the recommended health and safety committee, develop and implement an occupational medical plan in accordance with NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments; and develop and implement a physical fitness program in accordance with NFPA 1583, Standard on Health-Related Fitness Program for Fire Fighters.

**Member Assistance and Wellness Program**

Another important part of any fire department health and wellness program is access to help for substance abuse and/or work-related stress. Professionals in the emergency response field understand that the stresses associated with emergency response operations
HEALTH AND SAFETY

NFPA 1500 (continued)

often lead to both physical and mental problems in responders. This chapter of NFPA 1500 addresses the need for personnel assistance and wellness programs; it includes items such as:

1. Providing personnel with a professional assistance program for help with substance abuse, stress, and personal problems that affect fire department work performance;

2. Having a written policy statement on alcohol and substance abuse; and,

3. Providing a wellness program for all personnel.

The Study Team did not find any written policy on a wellness program at the LMFD that complies with NFPA 1500. Such a program is important regardless of whether the members are volunteer or paid. The most important component of any emergency response organization is its people; therefore, an organization should strive to take care of its members physically and mentally as well. The LMFD should develop and implement a written wellness program that includes personnel health and well-being, medical monitoring, fitness requirements, injury prevention, alcohol and substance abuse, and critical incident stress management.

SUMMARY

The health and safety of firefighters should be a major concern of those delivering the services, those receiving the services, and those helping to pay for the services. Individuals working in public safety, particularly firefighting, perform one of the most physically demanding, and mentally stressful, occupations. Quite often, emergency responders are subjected to environments that require rapid physical and mental response with a minimum of preparation.

Traditionally, there has been little attention paid to the wellness and fitness of firefighters. However, over the past decade, the safety and health of all emergency services providers
HEALTH AND SAFETY

SUMMARY (continued)

have come to the forefront of discussion. Fire/rescue department’s nationwide are implementing programs that help improve and support the health and wellness of their workforce.

A recent initiative between the International Association of Fire Chiefs and International Association of Fire Fighters has resulted in the development and distribution of a wellness-fitness program for firefighters and EMS personnel. This program serves as an outstanding model of how labor and management can work together to reduce firefighter injuries and fatalities while improving the overall health of fire department personnel. The volunteer fire service needs to take the same initiative and further develop its work in the wellness/fitness arena.

The LMFD and its seven fire companies lack a comprehensive, standardized, safety and health program and fall short in many areas of compliance with NFPA 1500. Many professionals in the fire service say that safety is an attitude that must be believed in, that must be communicated, and most importantly, must be enacted. The LMFD needs to begin addressing safety “with an attitude” instead of just giving “it service on paper.” The Study Team hopes that the LMFD will take action on each recommendation so as to take care of their most valuable resource—their people.

RECOMMENDATIONS

8.1 The LMFD should revise and enforce the provisions of SOP No. 5, Health and Safety Standard, so that it complies with the current edition of NFPA 1500.

8.2 The LMFD should develop and implement an injury reporting and investigation program that meets the requirements of NFPA 1500.

8.3 The LMFD is encouraged to implement a vehicle collision reporting and investigation process that meets the requirements of NFPA 1500.
HEALTH AND SAFETY

RECOMMENDATIONS (continued)

8.4 The LMFD should create a joint health and safety committee with representatives from all seven companies, the paid firefighters, and a representative each from the firefighter’s relief association/s and the Township’s insurance department.

8.5 The LMFD should appoint one person as the LMFD health and safety officer and that person be trained and given full authority to act on all health and safety matters as described in NFPA 1500. The LMFD health and safety officer should serve as the chairperson of the LMFD health and safety committee.

8.6 Each member fire company should appoint a health and safety officer to be trained and given full authority to act at the company level on health and safety matters as described in NFPA 1500 and LMFD SOP No. 5.

8.7 The LMFD should develop and implement an NFPA 1500-compliant comprehensive collision and injury prevention program that ensures problem identification, injury and collision prevention training, and injury/collision investigation.

8.8 The LMFD training program should be overhauled to include the implementation of and emphasis on certification-based training, to include the development and implementation of a thorough and effective in-service training program—all in compliance with NFPA 1500.

8.9 The practice of “grandfathering” members who have not met training requirements should be phased out with the revision and enforcement of minimum training requirements for all officer ranks.

8.10 The LMFD is encouraged to implement officer training requirements that includes Fire Officer II level (NFPA 1021) and completion of ICS 300 level training (NIMS) for chief officers and certification to the Fire Officer I level (NFPA 1021) and completion of ICS 200 level training (NIMS) for captains and lieutenants.
HEALTH AND SAFETY

RECOMMENDATIONS (continued)

8.11 The LMFD should immediately cease the practice of permitting members to ride the tailboard, in the hose bed and on the main ladder of emergency apparatus.

8.12 The LMFD should develop and implement a driver training program that is NFPA 1002-compliant and standard for all LMFD fire companies.

8.13 The LMFD is encouraged to develop and implement a protective clothing cleaning and maintenance program that complies with NFPA 1851, Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protection.

8.14 The LMFD is encouraged to implement and enforce a “no facial hair” (except limited, mustaches) policy for members approved to wear SCBA.

8.15 The recommended health and safety committee should be tasked to develop and implement a written respiratory protection program that includes the use, maintenance, and repair of SCBA as well as annual training and recertification for personnel.

8.16 The Township and the LMFD are encouraged to replace Air 24 with a similar air/light unit that has sufficient breathing air compressor and air storage capacity to meet the demands of the new LMFD SCBA units.

8.17 Regarding incident management, the LMFD is encouraged to:

A. Develop clear and consistent incident management policies and procedures that are standardized throughout the Township regardless of the incident’s location;
B. Develop and implement response and mutual aid policies and procedures so that service delivery throughout the Township is consistent; and,
C. Discontinue the practice of permitting the individual fire companies to develop their own response and incident management SOPs and thereby enforce all LMFD SOPs.
HEALTH AND SAFETY

RECOMMENDATIONS (continued)

8.18 The LMFD is encouraged to develop and implement a FAST SOP that is used consistently and covers the establishment of an initial 2-out crew (standby team) and then transitions to FAST implementation, including moving the FAST “up” in the dispatch order to at least the fourth due company.

8.19 The LMFD, under the lead of the recommended health and safety committee, should develop and implement a standardized accountability system that is used by all companies on a consistent basis at every emergency incident.

8.20 The LMFD health and safety committee should be tasked to review all of the communications and radio system recommendations presented in the Communications section of this report for inclusion in health and safety SOP development and implementation.

8.21 The LMFD is encouraged to develop and implement a post incident analysis policy and procedure that is used for all significant fire/rescue incidents which occur within the Township and Borough.

8.22 The LMFD should work with the Township (or state if needed) to install a traffic control device on Montgomery Avenue in front of the Union Fire Station so that traffic can be stopped during times of apparatus response and return.

8.23 The Township, Borough and the LMFD should immediately prohibit alcohol consumption on all LMFD fire company premises and that those companies failing to do so have their Township funding withheld pending compliance.

8.24 The Township, Borough and LMFD should consider implementing a “no smoking” policy in all fire stations and LMFD facilities.

8.25 The LMFD, in conjunction with the recommended health and safety committee, should develop and implement an occupational medical plan in accordance with NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire
HEALTH AND SAFETY

RECOMMENDATIONS (continued)

Departments; and develop and implement a physical fitness program in accordance with NFPA 1583, Standard on Health-Related Fitness Program for Fire Fighters.

8.26 The LMFD should develop and implement a written wellness program that includes personnel health and well-being, medical monitoring, fitness requirements, injury prevention, alcohol and substance abuse, and critical incident stress management.
CHAPTER NINE:
VOLUNTEER RECRUITMENT
& SELECTION