

# Fire and Rescue Department

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LOB #236:

## **HEALTH AND SAFETY**

### **Purpose**

The goal of the Fairfax County Fire and Rescue Department's Health and Safety Section is to provide comprehensive occupational health and safety service to FRD uniformed and volunteer personnel and appropriate medical examinations to all public safety agencies and their applicants in order to maintain a safe and healthful workplace and to ensure all public safety agencies have personnel medically fit for duty. This goal is achieved in accordance with NFPA 1500: Standard on Fire Department Occupational Safety and Health Programs and the Occupational Safety and Health Administration (OSHA) General Duty Clause (29 USC 654 (A) (1)). The intent of this statute is to protect employees from workplace accidents and exposures by requiring employers to recognize and correct hazards and provide a place of employment which is free from the recognized hazards. The Safety Section's mission is to support, educate, and communicate with the FRD members in an effort to correct unsafe behaviors and promote firefighter safety and wellness in all divisions of the department.

### **Description**

The Health and Safety Section provides guidance, management oversight, and medical services for early detection and prevention of job-related illness and injury. There are four distinct functional areas in the Health and Safety Section.

The *Public Safety Occupational Health Center (PSOHC)* is the primary vehicle through which medical services are delivered to all public safety agencies in the County including the FRD, the Police Department, and the Sheriff's Office. All applicants to public safety agencies are evaluated and screened at the PSOHC. The PSOHC provides pre-placement evaluations, periodic health assessments, return-to-work and fitness-for-duty evaluations, separation examinations, surveillance of occupational exposures, medical clearance for respirator use, and case management for occupational injuries and illnesses. In addition, the center staff tests and certifies members annually in the correct selection of respiratory protection equipment. The PSOHC assists members affected by occupational injuries or illnesses in their rehabilitation in an effort to facilitate their return to active duty or limited duty. Another activity for the center, within their existing capacity, is the treatment of minor occupational injuries sustained on the job by firefighters. The PSOHC also provides medical services to the Fairfax City Fire Department, the Town of Herndon Police, and the Town of Vienna Police.

A concurrent activity is the Confidential Health Database component that maintains health files on each employee and volunteer. These health files include results of regular medical evaluations, physical performance tests, occupational illnesses or injuries. Also included are files related to exposures to suspected hazardous materials, toxic products, or contagious diseases. Projects also include on-line injury reporting, client billing software, MEDGATE (medical records management system) and an injury/restricted duty database.

As part of the PSOHC staff, a clinician is assigned that provides counseling to all department employees on behavioral health. This individual is directly involved with stress and crisis management to employees who may have suffered a great loss or experienced a very traumatic event.

Light Duty Programs are designed for personnel who have sustained on-the-job injuries or who are experiencing medical problems that prevent them from performing their full job duties but have the ability to work in some capacity. Job assignments are carefully matched to the individuals' abilities and restrictions, while supporting and monitoring rehabilitation efforts to ensure a timely return to full duty, permanent alternative placement or retirement from the department.

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The *Wellness/Fitness Program* provides resources, time, and expertise to firefighters to achieve and maintain peak physical fitness levels, to facilitate recovery from a work-related injury or illness, and to minimize the risk of on-the-job injuries. The wellness component incorporates behavioral health, physical fitness, nutrition, and injury and illness prevention and rehabilitation. The fitness component supports a structured physical fitness program and involves the purchase, installation, and maintenance of fitness equipment for the Massey Fitness Center, Training Academy, and fire stations. The fitness component is supplemented by Peer Fitness Trainers who conduct training sessions for incumbents and firefighter candidates and assist with the administration of the Work Performance Evaluation (WPE) and Candidate Physical Abilities Test (CPAT). In addition, the Peer Fitness Trainers develop and administer the US Department of Justice mandated physical performance training requirements for candidates who participate in the CPAT. The fitness component provides physical performance assessments on any individual returning to full duty from a debilitating injury, illness, or other extended leave.

The Critical Incident Stress Management Program (CISM) provides trained clinicians and peer counselors to identify and counsel individuals who are experiencing difficulties in coping with critical incidents encountered while performing emergency services duties. CISM provides a program that identifies and assists members and their immediate families with substance abuse, stress, and personal problems that adversely affect work performance. In addition, this effort provides education and counseling for the purpose of preventing health problems and enhancing well-being. When necessary, staff may refer personnel or their immediate families to employee assistance program (EAP) and other health care services for the restoration of job performance. In addition, OHSP supports the Peer Support Program (PSP), which provides informal mentoring and sponsor services to co-workers facing issues of substance abuse to facilitate recovery.

The *Infectious Disease and Environmental Control (IDC) Program* attempts to identify, limit, or prevent exposures to infectious or contagious diseases. Another functional component within this program includes the educational prevention of exposures to airborne contaminants such as but not limited to the production of combustion products and asbestos fibers. The IDC provides employees and volunteers with protective equipment to minimize or prevent members from potential exposures to blood borne pathogens and other infectious diseases. The program delivers a comprehensive educational and control program for personnel who may potentially be exposed to blood borne pathogens or infectious diseases. The IDC ensures all members have access to an appropriate immunization program and ensures all members have adequate antibody titer levels to certain infectious diseases, and ensures annual Tuberculosis testing as required by the Food and Drug Administration (FDA) and Center for Disease Control (CDC). The IDC maintains the department's respiratory protection program that addresses the selection, safe use, maintenance of respiratory protection equipment, and training on the devices. The IDC under 29 CFR 1910.134, OSHA Respiratory Protection maintains the assurance of air quality testing.

The *Safety Program* follows the NFPA 1521 Standard for Fire Department Safety Officers and includes multiple field activities. Safety officers are assigned to 24-hour shift duties. Safety officers ensure OSHA compliance throughout structural fire suppression, emergency medical, hazardous materials, and technical rescue responses. Safety officers develop and distribute safety and health information, manage compliance with the Department of Finance's Risk Management program, develop accident prevention programs, and provide instruction on safe work practices. When indicated, safety personnel provide accurate investigation, identification of corrective actions and the reporting for claims involving personal injury, toxic exposures, vehicle accidents, citizen complaints of damage and loss or damage to County-owned vehicles and equipment. All work locations are inspected to ensure compliance with Federal, State, and Local health and safety laws. Safety officers ensure all members have appropriate personal protective clothing and equipment for safe operation within their specific positions, and train personnel in the care, use, inspection, maintenance, and limitations of the protective clothing and equipment. Finally, safety officers facilitate the FRD's compliance with the following code requirements mandated for providers of fire protection services to localities.

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## Benefits

The health, wellness and safety of responders is paramount. Ensuring their well-being correlates to less time lost due to injury or sickness, safe careers and an enjoyable retirement. Less time lost reduces the fiscal impact to the County, requiring less overtime for back-fill coverage, Worker's Compensation claims, etc. Members that are safe and healthy operate safely and efficiently and provide the excellent public safety service that residents, customers, and visitors of Fairfax County expect.

Over the last ten years, the Public Safety Occupational Health Center has diagnosed 11 cancers and 45 cardiac cases during annual physicals. Eight of the cardiac cases were life threatening requiring immediate intervention resulting in no loss of life.

Peer Fitness Trainers (PFT's) assisting the Wellness/Fitness Center staff are responsible for administering the Functional Movement Screens (FMS). An average severe injury (knee, shoulders) incurs a cost of approximately \$350,000. In FY 2013 and FY 2014, severe injuries were reduced due to the FMS program. The total dollar amount of the severe injuries was reduced by 39.7% from \$8,200,254 to \$4,948,775.

Physical therapy rehabilitation services provided to public safety personnel at no cost to the individual or Workers Compensation. In FY 2015, the cost savings were over \$150,000.

## Mandates

Code of Virginia – Line of Duty Act (§ 65.2-402) Presumption as to death or disability from respiratory disease, hypertension or heart disease, and cancer. All claims made under the Virginia Line of Duty Act require a comprehensive investigation.

*OSHA Fire Brigade Standard 29 CFR 1910.156 (2, e)* – Requires fire protection personnel to submit to an annual medical examination.

*NFPA 1500 – Standard on Fire Department Occupational Safety and Health Programs*

*NFPA 1521 Standard for Fire Department Safety Officer Professional Qualifications*

*NFPA 1581 - Standard on Fire Department Infection Control Programs*

*NFPA 1582 Standard on Medical Requirements for Fire Fighters, ADA - Americans with Disabilities Act, Virginia Workers Compensation Act, OSHA 29 CFR 1910.134 Respiratory Protection standard, and NFPA 1001 requiring candidates and incumbents alike to be physically fit to operate safely and efficiently.*

*29 CFR 1910.1030 – Bloodborne Pathogens; Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990*

*29 CFR 1910.134, OSHA Respiratory Protection* - Requires that when employees enter a hazardous area using respiratory protection, one or more similarly equipped employees must be standing by to provide accountability and assist in rescue if needed. Specific requirements are listed for regular maintenance and testing of respiratory equipment, fit testing, and other requirements.

*Occupational Noise Exposure (OSHA 29 CFR 1910.95)* - Requires employers to measure sound levels in the workplace, provide protective hearing equipment, develop a hearing conservation program and maintain records on employee noise exposure levels.

*Asbestos (OSHA 29 CFR 1910.10)* – Establishes minimum health risks and training associated with asbestos exposure. Provides appropriate workplace and medical surveillance for individuals working in or otherwise exposed to an environment containing asbestos materials. Asbestos control plans are developed and training is provided to employees at each work site identified as containing asbestos materials.

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*Personal Protective Equipment (OSHA 29 CFR 1910.132 and 1910.140)* - Establishes general requirements for employers to provide testing, inspection, and maintenance of personal protective equipment (PPE) for employees exposed to workplace hazards. Employees must be trained on the proper use of such equipment to include eye protection, face protection, head and extremity protection, protective clothing, respiratory protection, and protective shields and barriers.

*Hazardous Waste Operations and Emergency Response (OSHA 29 CFR 1910.120)* – Applies to personnel involved in hazardous materials response; Hazard Communication (OSHA 29 CFR 1910.1200) - Sanitation requirements (OSHA 29 CFR 1910.141) – inspections of fire department facilities; Permit-Required Confined Spaces (OSHA 29 CFR 1910.146) – protection for personnel who enter “permit-required confined spaces.

Virginia Senate Joint Resolution No. 120 - Requesting the Virginia Fire Services Board to develop and maintain a statewide database for the collection and analysis of information documenting firefighter exposure to toxic substances, 1994.

### Trends and Challenges

The Public Safety Occupational Health Center is heavily reliant on medical technology. To remain at the forefront of medical care requires an investment in constantly evolving technology. For example, wireless treadmill evaluation/testing has the ability to transmit results instantaneously to a consult specialist (cardiologist, radiologist, etc.) for review/recommendations providing patient care diagnostics immediately rather than waiting for a follow-up appointment. However, medical equipment is expensive and as a result of budget concerns, FRD is challenged with keeping up with medical advancements in technology.

The FRD operated with one Safety Officer responsible for the whole County until FY 2009 when a second Safety Officer was added to provide additional coverage to ensure incident scene activities were performed in a safe manor. Due to increasing traffic congestion and size of the County, the on-scene times of a Safety Officer were still extended, thus reducing the likelihood of injury prevention. With incident scene injuries still on the rise, the addition of a third Safety Officer occurred in FY 2014 and FRD has realized a reduction in on scene injuries. As Fairfax County continues to grow and with volume continually increasing, on-scene response time will start to decline again in the near future possibly resulting in an increase in on-scene accidents and injuries.

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## Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
<b>LOB #236: Health and Safety</b>			
<b>FUNDING</b>			
<b>Expenditures:</b>			
Compensation	\$1,972,644	\$2,375,026	\$1,905,834
Operating Expenses	3,592,117	3,621,883	3,536,443
Capital Equipment	48,744	54,845	0
<b>Total Expenditures</b>	<b>\$5,613,505</b>	<b>\$6,051,754</b>	<b>\$5,442,277</b>
General Fund Revenue	\$0	\$0	\$0
<b>Net Cost/(Savings) to General Fund</b>	<b>\$5,613,505</b>	<b>\$6,051,754</b>	<b>\$5,442,277</b>
<b>POSITIONS</b>			
Authorized Positions/Full-Time Equivalents (FTEs)			
<b>Positions:</b>			
Regular	14 / 14	18 / 18	18 / 18
<b>Total Positions</b>	<b>14 / 14</b>	<b>18 / 18</b>	<b>18 / 18</b>

## Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Public Safety Occupational Health Center medical examinations	3,831	3,987	4,000	4,100	4,200
Number of personnel provided Functional Movement Screens	404	404	404	404	404
Physical therapy at WelFit Center rehabilitation dollars saved	\$83,484	\$153,088	\$151,823	\$160,000	\$165,000
Number of injuries occurring on fire ground incident scene	61	82	77	72	67
Number of Infectious disease exposures	351	418	276	275	275

The Public Safety Occupational Health Center delivers annual physicals to Fairfax County Fire and Rescue, Fairfax County Police Department, Fairfax County Sheriff's Department, Fairfax City Fire Department, Town of Vienna Police Department, and the Town of Herndon Police Department as part of a comprehensive medical monitoring and health screening program. The three outside agencies are billed for services. Physicals are expected to continue to increase as staffing in all public safety agencies increase.

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Functional Movement Screening (FMS), is a ranking and grading system that documents movement patterns essential to normal movement function. Screening systems employ unloaded and loaded movement patterns and often incorporate fatigue; all in an effort to illicit performance deficits. By screening these patterns, functional limitations and asymmetries can be identified. These scoring systems are then used to construct corrective exercise programs in which the most beneficial corrective exercises to restore mechanically sound movement patterns are programmed. Exercise professionals monitor the screening score to track progress and to identify those exercises that will be most effective at restoring proper movement and increasing strength in each individual. Based on current staff and resources, the number of personnel screened annually is expected to remain consistent.

It is the goal of the WelFit program to assist uniform personnel in maintaining fitness for duty through a variety of means such as, facility training, station visits, peer fitness training assistance, and fitness program design. The comprehensive program includes an occupational health center, physical therapist, strength conditioning exercise specialist, behavioral health specialist, wellness fitness facility, and peer fitness trainers. Part of this initiative includes an on-staff occupational physical therapist available for rehabilitation services. Specially trained in the function and physical needs of public safety, this resource is available at no direct charge to personnel or workers compensation. Dollars saved are projected to increase as more personnel take advantage of this opportunity.

NFPA and OSHA standards require safety officers at incident scenes. Safety officers assist incident commanders with fire ground risk assessment, and implement incident safety plans to prevent unsafe actions and injuries. With the addition of the third Safety Officer in FY 2014, injuries occurring on the fire ground incident scene have decreased. It is expected with the increased training and oversight of scene safety management, this trend will continue.

The infectious disease program delivers all Federal and State required training and education for infectious disease precautions including annual refresher updates to all uniformed employees. As a result of infectious disease education, training and supplying proper personnel protective equipment, the number of infectious disease exposures are declining.