

Fire and Rescue Department

LOB #234:

SPECIAL OPERATIONS

Purpose

Special Operations for the Fire and Rescue Department (FRD) is managed by the Deputy Chief of Special Operations. The Deputy Chief works with two Battalion Chiefs and an Emergency Management Specialist to oversee the planning, training and response aspects of special operations trained personnel.

Description

The Special Operations Division consists of the Hazardous Materials Response Team, Marine Operations Team, Technical Rescue Operations Team, Emergency Preparedness, National Capital Region Incident Management Team, and the Urban Search and Rescue Team -Virginia Task Force.

Hazardous Materials Response Team personnel respond to accidental vehicle fuel spills, gas leaks, and fixed facilities spills; intentional hazardous materials releases of chemicals, fuels, biological agents, radiological materials, explosives or hazardous waste related to environmental crime and terrorism. The team is specially trained and equipped to detect and identify unknown chemicals, and control or contain the release of hazardous materials. The team provides environmental protection and decontamination of persons or properties, performs foam operations for tank farm, pipeline, and highway incidents.

Marine Operations Team personnel are licensed boat captains and certified radar observers responding to emergencies on rivers, lakes and ponds. The team responds to all types of water-related emergencies including drowning incidents, watercraft accidents and fires, and maintains a safety patrol on the Pohick Bay and Potomac River during summer weekends and holidays.

Technical Rescue Operations Team (TROT) personnel respond to complex and challenging rescue incidents including: high-angle incidents occurring on cliffs or high-rise buildings, confined space incidents occurring in tunnels, tanks or sewers, building collapses due to construction accidents or bombings, trench events related to excavations or construction mishaps; and industrial or transportation accidents tunnel rescue incidents, and swift water incidents within Great Falls Park.

The Special Operations Deputy Chief oversees collaborative efforts associated with response, training and liaison activities related to *special operations* services within the County.

Emergency Preparedness is responsible for planning, preparedness, and coordination for natural (hurricanes, tornados) and man-made (hazardous materials, transportation incidents) disasters, homeland security threats, and special events. They play a critical role in coordinating activities with other public safety agencies including the Police Department, Health Department, Emergency Management and state and federal response partners.

The *National Capital Region Incident Management Team (NCR-IMT)* is a cadre of incident management professionals. The team is a ready response unit available to any Washington Council of Governments (COG) partnering jurisdiction to support management of long term or large scale emergency incidents.

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Benefits

Capabilities of the special operations teams continue to evolve and increase with the changing environment. After 9/11 special operations teams training expanded to battle new threats and prepare for response and mitigation to a variety of hazards. Special operations personnel are dedicated to serving the County and protecting the environment through prevention and preparedness, with efficient and effective response to special operations incidents.

Advanced levels of training prepare firefighters for rapid response and professional emergency management to ensure the residents and visitors of Fairfax County are provided with immediate, top quality emergency response.

Mandates

National Fire Protection Association (NFPA) 472/473: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents

NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents

Occupational Safety and Health Administration (OSHA) 1910.120: Occupational Safety and Health Standards.

Trends and Challenges

The number and type of special operations emergency response events are ever changing in scope and complexity. The highly technical and complex nature of the response to hazardous materials releases, technical rescue events, and swift water emergencies presents several challenges. The challenges associated with these responses require the responder involved to receive additional training, specialized protective equipment, and expanded treatment protocols.

The fire and emergency medical response field is demanding, with high expectations of professional standards, leadership qualifications, and training obligations. It is vital for fire service professionals to have the foundation of skills to think critically and act decisively to meet the challenges of emergency response. Faced with a growing demand for service, and a growing organization, challenges present in the form of finding the time and the means to provide necessary training programs.

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Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
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FUNDING			
<u>Expenditures:</u>			
Compensation	\$765,123	\$727,891	\$701,138
Operating Expenses	416,419	460,213	328,414
Total Expenditures	\$1,181,542	\$1,198,848	\$1,029,552
General Fund Revenue	\$0	\$0	\$0
Net Cost/(Savings) to General Fund	\$1,181,542	\$1,198,848	\$1,029,552
POSITIONS			
<i>Authorized Positions/Full-Time Equivalents (FTEs)</i>			
<u>Positions:</u>			
Regular	3 / 3	3 / 3	3 / 3
Total Positions	3 / 3	3 / 3	3 / 3

Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Number of personnel trained as Technical Rescue Technician/Level II	165	155	149	170	155
Provide initial technical rescue response to specialized incidents in 10 minutes or less	100%	100%	100%	100%	100%
Number of personnel trained as Hazardous Materials Technician	224	251	240	225	215
Provide initial and advanced hazardous materials response personnel to specialized incidents in 10 minutes or less	100%	100%	100%	100%	100%
Number of emergency response/disaster response manuals written/updated/trained	0	4	5	5	6

NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents outlines the training and qualifications required to be categorized as a Technical Rescue Technician level II. Training focuses on incidents where commercial or heavy vehicles are involved, complex extrication processes will have to be applied, or that involve heavy machinery or more than digital entrapment of a victim. Emphasis is placed on heavy lifting and stabilization, utilization of heavy towing and recovery services and complex patient packaging and removal techniques.

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The ability to meet the goal of 165 personnel trained to the Technician level has experienced some challenges in the past four years as a result of department growth affording personnel promotional opportunities making them no longer able to participate in the technical rescue program and loss due to retirements. The lower than targeted numbers have not yet reached a point where it has created a staffing issue, but must be closely monitored. Currently the certification class is offered every two years, if numbers dropped suddenly below required levels FRD could hold an additional school, which may require additional funding.

The ability of the department to deliver an initial technical rescue response to an incident in 10 minutes or less will face challenges as the County continues to realize population growth and as a result increased traffic congestion. Currently FRD has 4 units with this specialized training strategically located throughout the County, but as response times increase FRD will have to not only review the current positioning of resources but also identify if there is a need to expand.

NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents outlines the training and qualifications required to be categorized as a Hazardous Materials Technician. Training focuses on the recognition and identification of a hazardous incident, response chemistry, environmental regulations, radioactive material, air monitoring and equipment, spill control and containment, and decontamination procedures.

The program has been able to maintain its goal of 200 training Hazardous Materials Technicians. The projected reduction of trained personnel does not pose a staffing issue now or in the immediate future as FRD is currently above the goal. FRD will continue to monitor the numbers closely to ensure staffing levels remain within reasonable numbers.

The ability of the department to deliver an initial hazardous materials response to an incident in 10 minutes or less will face challenges as the County continues to realize population growth and as a result increased traffic congestion. Currently FRD has 6 units with this specialized training strategically located throughout the County, but as response times increase FRD will have to not only review the current positioning of resources but also identify if there is a need to expand.

The Emergency Preparedness program's ability to collaboratively develop, train, and exercise emergency response plans has not greatly increased or decreased in the past year. A slight increase is anticipated in the years to come due to the planning schedule becoming mostly maintenance/updating and less creation of plans. While creating plans is a mostly straightforward process, trying to implement an effective training program and track results of that training program for FRD personnel is challenging due to the limited number of people assigned to the Emergency Preparedness program. One of the greatest factors contributing to the performance of the program has been the support from the rest of the Operations Bureau and time spent by subject matter experts contributing to the planning process.

Grant Support

US&R – FEMA

Virginia Task Force One (VATF1) is one of 28 FEMA Urban Search and Rescue (US&R) task forces spread throughout the continental United States trained and equipped by FEMA to handle structural collapse. The team is a part of the National Urban Search and Rescue National Response System that was established in 1989 under the Robert T. Stafford Disaster Relief and Emergency Assistance Act as a framework for structuring local emergency services into an integrated disaster response task force. The task force, complete with necessary tools, equipment, required skills and techniques, can be deployed by FEMA within six hours to rescue victims of structural collapse. Because of this relationship, the Department has been able to develop and enhance its US&R capability to respond to disasters both locally and nationally.

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A task force is capable of multiple activities including physical search and rescue operations in damaged or collapsed structures, stabilization of structures, emergency medical services, damage assessments, and hazardous materials evaluations. It is typically comprised of specialists who are divided into four major functional areas of command, operations, planning, and logistics. Task force members include structural engineers, highly trained search canines and handlers, and specialists in the areas of hazardous materials, heavy rigging, logistics, and emergency medical services.

In addition to personnel, a comprehensive equipment cache is a part of the disaster response. The cache includes communications, locating, lifting, pulling, and other specialized equipment. Also, shoring, sensing, victim extrication, cutting, and drilling devices are part of the cache. The medical cache, deployed with the team, is designed to bring emergency medical services into the field and contains advanced life support equipment (including drugs and medical supplies) necessary for providing medical care to entrapped victims, task force personnel, and search canines.

Over multiple years, VATF1 has been awarded over \$16 million to cover the areas of program management, equipment, preparedness training, and storage and maintenance. The program's budget is established by Congress and a base amount is awarded equally to the 28 teams. There is a separate open award for deployment funding and the funds are awarded as disasters occur.

VATF1 has responded to numerous disasters such as the Oklahoma City Bombing (1995), 9/11 Pentagon (2001), Hurricane Isabel (2003), Hurricane Katrina (2005), Hurricane Ernesto (2006), Hurricane Ike (2008), Hurricane Irene (2011), Hurricane Sandy (2012), Oklahoma Tornados (2013), and Washington Mudslides (2014).

USAR – USAID

The Office of U.S. Foreign Disaster Assistance (OFDA) was established in response to the authorization of disaster assistance by Congress in Chapter 9 of the Foreign Assistance Act of 1961, as amended. OFDA plans and implements international disaster relief, rehabilitation, preparedness, mitigation, prevention, and early warning programs, and coordinates the U.S. Government's foreign disaster assistance program. The Task Force began its humanitarian response relationship with the U.S. Agency for International Development – Office of U.S. Foreign Disaster Assistance (USAID-OFDA) in 1986 following a tragic 1985 seismic event in Mexico City. Realizing the void of qualified search and rescue resources in the Americas Region, USAID-OFDA joined in a strategic partnership with Fairfax County and the Miami-Dade Fire and Rescue Departments to develop a self-sustainable response resource. Its first deployment was to the former Soviet Armenia in 1988 in the aftermath of a large earthquake.

The Cooperative Agreement between Fairfax County Fire and Rescue Department's Urban Search and Rescue Team (USA1) and the United States Agency for International Development/Bureau for Democracy, Conflict, and Humanitarian Assistance, Office of Foreign Disaster Assistance's (USAID/DCHA, OFDA) international Urban Search and Rescue (USAR) program supports the provision of search and rescue assistance in response to foreign disasters through Disaster Response and Disaster Preparedness/Mitigation. The program is demand-driven, with USAID/DCHA/OFDA serving in a coordination role.

Due to the inability to precisely define all activities in advance, USAID/DCHA/OFDA is substantially involved in the implementation of the program. Over multiple years, USA1 has received over \$25 million to maintain a constant state of deployment readiness. Funding for Deployment Readiness is provided for Project Management, Maintenance of USAR Team/Personnel Qualifications, Equipment and Relief Commodities Stockpile and Technical Assistance to also include the areas of Technical Advisory Services, Local Host Country Capacity-Building and Technology Transfer to International Organizations. Disaster Response funding provides for the immediate provision of a USAR team deployment or other staff and required equipment in response to a request for mission support outside the realm of urban search and rescue. Task force members include structural engineers, highly trained search canines and handlers, and specialists in the areas of hazardous materials, heavy rigging, logistics, and emergency medical services.

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USA1 is also required to be classified by the United Nation's International Search and Rescue Advisory Group (INSARAG) as a "heavy" team. The reclassification process occurs every three years. Classifiers consist of a cadre from the international urban search and rescue community who come to Fairfax County to observe the team perform mandated skills.

USA1 has responded to numerous international disasters such as the earthquake in Armenia (1988), earthquake in the Philippines (1990), bombing of the U.S. Embassy in Kenya (1998), earthquake in Turkey (1999), earthquake in Taiwan (1999), earthquake in Iran (2003), tsunami in Indonesia (2005), earthquake in Southeast Asia/Pakistan (2005), flooding in Bolivia (2007), earthquake in Peru (2007), Cyclone Nargis in Burma (2008), Hurricane Hanna in Haiti (2008), building collapse in Haiti (2008), earthquake in Haiti (2010), earthquake in Japan (2011), Typhoon Haiyan in the Philippines (2013), and earthquake in Nepal (2015).