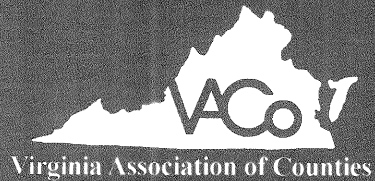


Recognizing the Best in County Government Programs!



## 2014 Achievement Awards



## 2014 VACo Achievement Awards

Deadline: June 2, 2014

### Application Form

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2014.**

#### Program Information

Locality Prince William County

Program Title Hazardous Materials Support for Law Enforcement

Program Category Criminal Justice & Public Safety

#### Contact Information

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#### Signature of county administrator or chief administrative officer

Name Susan L. Roltsch

Title Deputy County Executive

Signature Susan L. Roltsch

## Call for Entries

## **VACo Achievement Award Entry**

### **Prince William County Department of Fire and Rescue**

#### **Heavy & Technical Rescue Instructor Initiative**

##### **Abstract:**

Over the past several years the Virginia Department of Fire Programs (VDFP) had been unable to provide sufficient Heavy and Technical Rescue (HTR) classes and instructors to meet the needs of Prince William County's Fire and Rescue service. As a result Prince William County Department of Fire and Rescue (DFR) successfully petitioned VDFP to pilot a vetting process of County instructors to enable local delivery of VDFP beginning and intermediate HTR classes.

The evaluation and training process of prospective instructors was held in January and February 2013. As a result of this intensive process the County now has a cadre of instructors certified to teach these in-demand classes to the County's approximately 500 career and 1000 volunteer firefighters. The certificate provided at the end of class is identical to the certificate issued when a class is taught by VDFP HTR instructors.

Since Prince William instructors have begun teaching HTR classes in March 2013 they have completed 34 classes, teaching 757 students over 600 hours of instructional time. They are slated to teach 16 more classes before the end of the calendar year with the potential for a total of teaching 384 additional students.

##### **Need for the Program:**

Over the past several years the Virginia Department of Fire Programs (VDFP) had been unable to provide sufficient Heavy and Technical Rescue (HTR) classes and instructors to meet the needs of the Prince William County Fire and Rescue service.

HTR is VDFP's umbrella term used to describe their technical rescue classes. These include vehicle extrication, rope rescue, confined space rescue and trench rescue. VDFP is vested with providing HTR training across the state and does not have the instructor depth to provide the classes required by the County. They have approximately 50 instructors and provide upwards of 300 classes per year throughout the state.

The Fire and Rescue Association, the policy making body of the County's combination (career and volunteer personnel) fire and rescue service, has HTR training requirements for personnel who staff ladder trucks and heavy rescue squads. As a result there is an on-going requirement for HTR classes for the County's 500 career and 1000 volunteer firefighters due to transfers and retirements within the career staff and new personnel joining the County's volunteer departments. The yearly need translates into 28 classes with each class requiring 4 instructors. Due to their statewide commitments VDFP could usually support no more than 4 classes taught within the county in any given year. This leaves a deficit of 24 yearly classes.

**Description of the Program:**

Since 2010 The Prince William County Department of Fire and Rescue (DFR) had been requesting VDFP to develop a program where County fire instructors would be certified to provide local delivery of HTR classes to county career and volunteer firefighters. In 2012 DFP agreed to implement a program where qualified County fire instructors would go through an intensive evaluation and training program to enable them to teach all of VDFP's introductory and intermediate level HTR classes. These classes were *Introduction to Technical Rescue Modules 1 and 2, Vehicle Rescue Level I, Rope*

*Rescue Level I, Confined Space Rescue Level I and Trench Rescue Level I.* The evaluation and training program was scheduled for January and February 2013.

While awaiting VDFP approval to begin a program of local HTR class delivery DFR had solicited firefighters with the appropriate skill set to become HTR instructors. The skills required included Fire Instructor II certification, Technician Level certification (i.e. highest certification level) in their desired teaching field(s) and approval by their immediate supervisor as well as their entire chain of command up to and including their battalion chief. Those meeting the listed qualifications became the County HTR instructor candidates. These personnel were issued the appropriate textbooks and began to review and study the material in preparation of the evaluation process.

To better ensure success of the instructor candidates completed a series of train-ups, one for each HTR class. Each train-up was a two-part effort with one focusing on didactic knowledge and the other focusing on hands-on skill knowledge. Training has a database of fire and rescue topic questions which includes technical rescue topics. Five 100 question practice tests were generated for each HTR skill set for completion during off-duty hours to ensure instructor candidates were successful with their individual study efforts. At the completion of the written tests the questions and answers were reviewed with all instructor candidates in a classroom session to ensure all candidates understood right and wrong answers. The hands on skills train-ups focused on the actual rescue skills required for each class. These train-ups had each instructor candidate complete all the skills within VDFP's curriculum for each class. Each train-up session lasted for at least two to three 8 to 10 hour days. The instructor candidates reviewed all pertinent

equipment and techniques and the teaching methodology employed by VDFP for their HTR classes.

In January 2013 the VDFP formal evaluation and training program began. The format for the process was the same for each topic. The first day of the evaluation process used a version of VDFP's formal Pro-Board certification process used to certify personnel in their classes. The certification process tested skills in a particular subject based on the knowledge and skills listed in the appropriate chapter of the National Fire Protection Association's *NFPA 1006, Standard for Technical Rescuer Professional Qualifications*. The second and third days were the Train-the-Trainer (T-t-T) portion of the process. Each class DFR was permitted to teach, *Introduction to Technical Rescue Modules 1 and 2, Vehicle Rescue Level I, Rope Rescue Level I, Confined Space Rescue Level I* and *Trench Rescue Level I*, had its own 3 day evaluation and training process.

The morning of the first day of each session was a 50 question test. A passing grade was 80% or greater. Candidate instructor who successfully passed the written test progressed on to the hands-on skills testing. This testing concentrated on the actual skills required for a particular subject. Each skill has an associated check-off sheet with a comprehensive listing of the steps required to complete the skill in question. To pass the hands-on testing component required a successful completion of all skill check-off sheets. Instructor candidates passing both the written and the practical skills testing proceeded to T-t-T portion of the process.

Each T-t-T session consisted of a review of the curriculum by senior VDFP HTR instructors. During the T-t-T instructor candidates were evaluated on their knowledge of equipment, skills, techniques, safety practices and ability to instruct students during

practical training sessions. Instructor candidates were required to teach a segment of the lecture of a particular class with 10 minutes of prep time. Instructor candidates were also required to develop and teach a presentation related to the class. The candidates were given overnight to prepare their delivery. Instructors were evaluated in their classroom delivery skills of the topic as well as their overall classroom presence during all presentations. A VDFP requirement was for all instructor candidates were to complete and be able to teach the Introduction to Technical Rescue classes in addition to any other class they chose to teach.

When an instructor candidate successfully completed the evaluation and training process for a class they were then required to teach the class at least twice while under the direct supervision of VDFP HTR Instructors. An evaluation form was completed by the lead VDFP HTR Instructor and forwarded to the VFDP headquarters. Instructor candidates are required to receive two positive evaluations before being allowed to teach on their own.

**Cost of the Program:**

The costs of implementing the program are centered on personnel costs and equipment costs. For instructor candidates to be successful a significant amount of time was required for train-up sessions. Each topic of instruction required 3 days for a train-up. There were a total of 5 distinct classes – Introduction to Technical Rescue, Vehicle Rescue, Rope Rescue, Confined Space Rescue and Trench Rescue requiring a total of 15 days for train-ups. Most of the selected instructor candidates were firefighter assigned to field units and as a result they required backfill personnel which may incur overtime costs. The actual instructor candidates were placed on a day work schedule minimizing

any overtime for their train-up and subsequent T-t-T sessions. Each T-t-T was 3 to 4 days in length again requiring the instructor candidate to be present and the need to backfill their assignment in the field.

Prince William had a career firefighter who was a part-time HTR Instructor for VDFP who led the train-up efforts to prepare the instructor candidates for the T-t-T process. If an agency does not have the required expertise in-house to prepare their personnel they would have to develop a suitable program to ensure agency success. This could be as little as self-preparation by candidates to the agency securing contractors to provide candidate preparation.

This was a pilot effort between DFR and VDFP and as a result was funded by VDFP. If another locality were to pursue this program it is estimated that VDFP would charge approximately \$5000 per T-t-T. If all 5 T-t-Ts were completed the cost charged a locality would be approximately \$25,000.

Equipment costs for technical rescue are substantial. Each individual discipline requires specific, often costly, equipment. However, for an agency to entertain having their personnel qualified to instruct they should already have trained technical rescue personnel along with the appropriate equipment. Prince William has elected to provide our program dedicated training equipment for vehicle, rope, confined space and trench rescue operations. Most of the equipment is housed in its own dedicated trailer with the trench rescue equipment carried by a collapse rescue apparatus assigned to a fire station. This equipment is dual use for both training and incident response. The equipment costs incurred to establish trailers specifically designed to provide equipment for training is significantly more than if a jurisdiction elected to use equipment assigned to fire

apparatus actually used to provide technical rescue to the community. The vehicle rescue trailer designed to provide multiple sets of equipment for 3 simultaneous training rotations cost approximately \$150,000. The rope rescue trailer, equipped to provide equipment for 3 simultaneous training rotations and a rope rescue harness for each student cost approximately \$90,000. The confined space trailer cost approximately \$60,000 to outfit with the ability to operate 3 simultaneous rotations. The collapse unit cost approximately \$200,000 to equip to provide sufficient equipment to safe 2 separate trenches at once.

#### **Success / Results of the Program:**

At the conclusion of the T-t-T program 13 out of 14 instructor candidates became Introduction to Technical Rescue instructors, 10 out of 10 instructor candidates became Vehicle Rescue instructors, 9 out of 9 instructor candidates became Rope Rescue instructors, 9 out of 9 instructor candidates became Confined Space Rescue instructors and 9 out of 9 instructor candidates became Trench Rescue instructors. All have successfully completed their evaluation process with VDFP with the last two finishing at the end of April.

Since Prince William HTR instructors have begun teaching classes for the County they have completed 34 classes, teaching 757 students over 600 hours of instructional time. They are slated to teach 16 more classes before the end of the calendar year with the potential for a total of 384 students in those classes.

#### **Worthiness of an Award:**

In 2012 VDFP agreed and scheduled the required T-t-Ts for January and February 2013. There was no precedence for this program as this was the first time that VDFP



agreed to allow local delivery of HTR classes by personnel who were not already VDFP HTR Instructors. The instructor candidates had no idea what to expect. The success rate of DFP's previous HTR instructor development processes yielded few successful instructors and were well known for testing a candidate's technical and teaching abilities. The instructor candidates willingly put themselves in a position where failure was a distinct possibility. The instructor candidates were required to pass a written and skills tests before being able to complete the appropriate T-t-T. Testing determined whether they possessed the appropriate skill set and the T-t-T determined whether they were able to successfully teach a particular subject. They were evaluated on their knowledge of equipment, skills, techniques, safety practices and ability to instruct students during practical training sessions. They invested a total of 35 days during January and February to complete train-ups, testing and T-t-Ts. 15 days spent preparing and 20 days spent completing testing and T-t-Ts. 35 of 40 weekdays during the months of January and February were dedicated to becoming instructors. The instructor candidates gave countless off-duty hours practicing skills, studying textbooks, standards and regulations. They completely rearranged their professional and personal calendars over a two month period to attend train-ups, testing and T-t-Ts. They received many compliments from the state HTR instructors involved with the testing and evaluation process regarding their knowledge and skill level. They invested their time and energy and put their reputations on the line to become instructors for a program that the Department of Fire and Rescue Chief Kevin McGee has stated is "a strategically important program" to the success of the county's fire and rescue system.