

## APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2016.** Please include this application form with electronic entry.

### PROGRAM INFORMATION

County: York County

Program Title: Taking Action Against Fire Service Cancer - "Hoods and Wipes"

Program Category: Criminal Justice & Public Safety

### CONTACT INFORMATION

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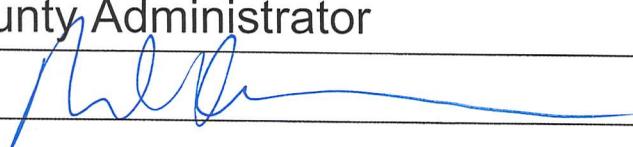
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### SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

Name: Neil Morgan

Title: County Administrator

Signature: 

## *County of York, Virginia*

### *VACo 2016 Achievement Award Submission*

# Taking Action Against Fire Service Cancer - "Hoods and Wipes"

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## **OVERVIEW**

The York County Department of Fire and Life Safety strives to maintain the highest standards of occupational health and safety and, in doing so, attempts to provide the most up-to-date training and equipment regarding fire industry safety initiatives. The department is well aware of the dangers our firefighters face on a daily basis, from fast moving cars on the street, to the roof collapse of a structure fire, and the list goes on. Those dangers are significant, obvious and tangible; however, the real danger that is causing far more firefighter fatalities is subtle and often overlooked. What is it? The answer is CANCER!!!! Cancer is the most dangerous and unrecognized threat to the health and safety of our nation's firefighters. While it is impossible to eliminate all the risks of an inherently dangerous profession to include carcinogen exposures, through awareness, training, and simple preventative measures, the Fire Service can begin to tilt the scales in its favor. A couple of ways York County Fire and Life Safety is working to combat this silent killer is through its "Hoods and Wipes" program.

## SUMMARY

Today's fire departments nationwide are responding to fires that are much different than those that we battled in the past. Today's fires grow more rapidly than the "legacy" fires of the past. Petroleum products are widely used in today's manufacturing and construction industries. Because of these manufacturing and construction practices, our firefighters are exposed to significantly higher concentrations of highly carcinogenic agents when performing firefighting functions. Fires today have more in common with hazardous material types of events than previous types of fires due to the plastics, synthetics, and hydrocarbons that are commonplace in residential/commercial structures.

A May 2013 report from a three-person panel that reports to the President of the United States regarding the National Cancer Program determined that approximately 41% of Americans will be diagnosed with cancer during their lifetimes. Statistically firefighters have a significantly higher risk for multiple cancers than the general population. For example, a male firefighter is 2.2 times more likely to acquire testicular cancer than the general population. Unfortunately, firefighters are not limited to just a greater risk of testicular cancer, but also multiple myeloma (1.53 times greater), Non-Hodgkin's Lymphoma (1.51 times greater), Skin Cancer (1.39 times greater), Brain Cancer (1.31 times greater), and the list goes on. Because there is no immediate visible impact of carcinogenic exposure, and the time from exposure to appearance of malignancies can be 20 years or longer, the fire service is just now beginning to understand the magnitude of the problem.

York County Fire and Life Safety, through training and awareness, has remained vigilant in trying to combat and prevent cancers. The gear provided to the department's firefighters is the best on the market and the department is proactive in staying within industry standards. However, no matter what gear a department purchases, the two most identified routes of exposure into the body is through the lungs and dermal absorption. Dermal absorption occurs primarily through the skin of the hands, neck, head, and groin during working incidents. For decades, York County Fire and Life Safety members have been diligent in their use of Self Contained Breathing Apparatus (SCBA) to protect their lungs. However, recent studies have shown that protective hoods are by far the most vulnerable portion of our protective gear. The hoods are the most permeable piece of equipment worn and, unfortunately, some of the most vulnerable areas of the skin are in the angle of the jaw, face, neck, and throat areas. The permeability of human skin increases for every five degree increase in skin temperature; the skin absorption rate increases by about 400%. In short, the soot and dirt enters the body at a drastically increased rate every time firefighters are working a fire. Thus, York County Fire and Life Safety implemented the use of wipes and the issuance of additional protective hoods.

## **SOLUTION**

It is fair to say that the risks associated with firefighting will never be eliminated completely, although diligent efforts to minimize the risks involved are continuously sought. York County Fire and Life Safety has identified a couple of ways to address some of the high-risk areas of exposures. First, the department has implemented gross decontamination at the fire ground, specifically using industrial strength skin wipes in the areas determined to be at greatest risk. Second, the department has issued two hoods to all personnel. In addition to these practices, the department is bringing more attention to cancer awareness and training. Policies and procedures are in place to direct members (during physical rehabilitation processes) to doff (take off) their gear and immediately use "Grime Boss" wipes to

decontaminate their face, neck (front and back), hands, and arms. This practice allows for quick decontamination of carcinogenic particles that have penetrated the protective hood worn during fire operations. The concept of the second hood is so personnel can always have a clean hood, thus decreasing the exposure to lingering cancer particles. Firefighters are always encouraged to shower immediately upon returning to the station to complete the decontamination process.

## **COST**

The cost to implement these specific initiatives has been minimal as compared to the cost of cancer treatments and lost time in the workplace is considered. In fact, many of the awareness and prevention efforts made by the department are low cost and high impact. However, the essential exposure solutions, such as personal protective equipment and the cleaning of firefighters' gear, replacement of gear, annual physicals and cancer screenings, require initial and on-going funding. With simple solutions like wipes and hoods, costs should be limited over a period of time. These low-cost but highly effective initiatives will produce reductions in costs associated with the loss of qualified members to illnesses, cancer treatments, increased personnel costs and insurance costs.

## **RESULTS**

Over the last year, the results of this program have been significant in that members are drastically more aware of their work environments and the "buy in" factor is there. Personnel are consistently using the "Grime Boss" wipes during rehab and washing their hoods on a regular basis. For example, many station officers have initiated "Wash Your Hood Sundays," which ensures hoods are cleaned even though they may not have been used on the fire ground. This helps prevent exposure from hoods that are contaminated from the diesel exposure of the apparatus floor and/or other sources that may not have been known. From that standpoint, the program is successful; however, statistical data to back the successfulness of the program may not be determined for years to come.

## WORTHINESS

The York County Department of Fire and Life Safety believes that this important initiative and adaptive health and safety program is worthy of the recognition of this prestigious award. The department has always placed the safety of our citizens, businesses and visitors, as well as its members, as its highest customer service priority. This program is a reflection of that commitment and the long-term effects of this program not only benefit members of the Department of Fire and Life Safety, but the County of York as well. The proactive, innovative approach taken by the department will enhance the overall wellness of our firefighters, minimize the overarching costs associated with a cancer diagnosis and serve as a model for other public safety organizations to follow.