Virginia Association of Counties

ACHIEVEMENT AWARDS

APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2018.** Please include this application form with electronic entry. If you do not receive an email confirming receipt of your entry within 3 days of submission, please contact Gage Harter.

PROGRAM INFORMATION

County: County of Henrico

Program Title: Community Smoke Alarm Initiative

Program Category: Criminal Justice & Public Safety

CONTACT INFORMATION

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Title: Management Specialist

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SIGNATURE OF COUNTY ADMINISTRATOR OR DEPUTY/ASSISTANT COUNTY ADMINISTRATOR

Name: Douglas Middleton

Title: Deputy County Manager for Public Safety

Signature:

1. Program Overview

The Community Smoke Alarm Initiative, a community risk reduction program highly dependent on data, was developed and implemented in Spring 2017. The program utilizes a comprehensive risk analysis, which is 84% reliable based on 2017's actual performance.

Unlike any other program in the United States, the Henrico Smoke Alarm Initiative uses specific data for workload efficiency and performance measurement. The program's technology is map-centric and directly tied with the firefighter's dispatch software. Since implementation, every alarm installed and citizen interaction in the County has been recorded using available technologies on mobile devices.

The developed processes, technology solutions, and initial 1,350 alarms were all secured through internal resources, external partnerships, and incurred no cost to the recipients.

2. Problem/Challenge/Situation Faced by Locality

Prior to 2017, the Division operated a smoke alarm program based upon phone requests. Additionally, when firefighters identified a deficient smoke alarm during an in-home interaction, the smoke alarm was replaced. Infrequently, smoke alarms were documented through a paper/interoffice mail process without a reliable data repository. Smoke Alarm installation location data and recipient demographics were not adequately documented or retained. There was no focused action to identify those within the community most at-risk.

During the later months of 2016 and early 2017, the Henrico community experienced an atypical rise in residential fire deaths. The Division of Fire recognized the need and the opportunity to secure support for a formalized process for focused smoke alarm installation and data management.

Prior to 2017, the Division utilized an informal and non-focused approach that provided a means for community risk reduction, but it lacked the ability to capture data to evaluate performance measurement and workload efficiency. In a response system already stressed by increasing call load, the Division

strived to design a program that increased community interaction while simultaneously decreasing workload.

3. How Program Fulfilled Awards

The Henrico County Division of Fire identified and closed a critical gap in community risk reduction and the safety of our residents. The gap was assessed, data applied, and an efficient solution developed. The risk assessment tool was overwhelmingly successful in identifying those in need. Without any direct cost to the community, more than 2,700 interactions occurred that worked to reduce residential fire risk.

Henrico Fire worked closely with existing resources and developed a sustainable, low-cost program that resulted in near-immediate implementation. The program was planned and developed in a manner to which efficient and effective community service was paramount. The program has been such a success interest and involvement has grown into numerous community partnerships to support the program.

4. How Program Was Carried Out

Henrico Fire exhibits the leanest budget of all metro fire agencies in the region. We strive to utilize existing resources rather than exploring third-party solutions which would incur increased costs. The Henrico Smoke Alarm Initiative was developed and deployed utilizing new and existing applications. Internal developers worked directly with interagency partners to develop a solid and sustainable solution.

Within the community, Henrico Smoke Alarm Initiative focuses upon identifying those most at risk and living with the long-term effects of the economic downturn. The program utilizes a “no-cost” approach to citizens in need of smoke alarms.

5. Financing and Staffing

Outside of personnel costs, the Community Smoke Alarm Initiative reflects stewardship of county funding by not incurring any development, implementation, or sustainability costs. County IT Developers, hired to

develop software solutions and support multiple agencies, developed the program during their normal workflow.

The vehicle used was pulled from the surplus lot prior to auction. Fuel is supplied through the Division of Fire's general fuel fund. Ladders, tools, and printed materials were donated by the Henrico Firefighter Foundation.

6. Program Results

Community Smoke Alarm Initiative initially identified 3,243 homes most at-risk for fire. During 2017, 2,793 homes were visited by Henrico Firefighters offering community risk reduction education and smoke alarms. On average, the non-operational staff install 165 alarms monthly with more than 200 door knocks. 54 percent of those homes targeted resulted in no answer at the door. A door hanger was left and those residents who did not call back will receive a second visit in 2018.

1,107 alarms were documented and installed in the first year of the program. Unfortunately, it is not possible to compare to years prior because unreliable data management processes. Anecdotally however, the American Red Cross (our primary supplier of alarms in years past) stated they provided approximately 125 alarms in both 2015 and 2016.

The risk assessment provided to be 79% reliable, meaning 79% of all homes Henrico Firefighters entered based on the risk assessment were without a working smoke alarm.

Two interesting smoke alarm interactions to note:

- Personnel replaced an alarm manufactured in 1976 with the original battery. The occupant was not aware that he needed to replace the battery or alarm.
- Personnel also encountered, on multiple occasions, citizens initially refusing the service because, "We don't need a smoke alarm, we don't smoke."

Those interactions demonstrate another important success of this program – community education and awareness. Not only is the Division providing smoke alarms, but we are also giving residents other tools and advice to mitigate risks within their homes.

7. Brief Summary

The development of the Community Smoke Alarm Initiative involved more than twenty different agencies and individuals at all levels of government. Members of the development team included those from social services, mental health, law enforcement, elder care, building inspections, and information technology. The group was split for functional assignments and focused on risk assessment, technology development, and program implementation.

A comprehensive risk assessment was developed to identify those homes in the community most at-risk for fire and at-risk for not having a working smoke alarm. Data from the departments of Real Estate, Public Utilities, Building Inspections, and emergency dispatch databases were joined to create the Residential Fire Death Risk Assessment.

With the risk assessment in hand, the addresses were identified, and technology applications were paired. Using in-house software developers, a map-centric program was developed that used the County's dispatch platform as a data retention platform. The technology allowed for citizens to request smoke alarm assistance by phone or website as well as collect performance data from smoke alarm installations.

The Community Smoke Alarm Initiative software is hinged on mobile devices for data collection. Risk Assessment addresses are assigned with two-clicks of a mouse, and web requests are approved in the same manner. Assigned "work orders" are virtually dispatched through the emergency dispatch process

with a modified response. Community interaction data, smoke alarm installations, basic demographics, and more are collected through this process.

Citizens requesting smoke alarm assistance for family members or third-party agencies (such as elder care) requesting for a client may receive automated notifications when the interaction takes place.

To address the increased workload upon operational personnel, light-duty staff were used for more than 90% of the visits. Through funding from the Henrico Firefighter Foundation, basic tools and supplies were purchased to outfit a near-surplus vehicle from the County's general fleet. Light-duty staff arrive at 0800 each day, pack the vehicle with smoke alarms, and use the mobile technologies to assign themselves the daily workload.

In early July 2017, the American Red Cross, endorsing the uniqueness of our program, provided more than 1,000 alarms for the program - although, by year's end, the alarms were exhausted. The program remains active through community donations and partnerships.

Community Smoke Alarm Initiative

Developed Risk Assessment Summary:

At-Risk Home Profile

3,243 Total Homes Identified	**3.1** Average # of Bedrooms
1.4 Average Number of Full Bathrooms	**54%** Do Not Have Air Conditioning
1.5 Average # of Floors	**1951** Average Year Built
1423 Average Square Footage	**$108,700** Median Improved Value

2017 Risk Assessment Perimeters:

Data	Perimeters	&	Additional Data	Additional Perimeters
Property Type	ResidentialCommerical (=) R			
Age of Home	Built <1970	&	Date of Sale	Sold/Transferred ≤1980
History of Fall	3+ Incidents in 36 Months			
Property Condition	(=) 01 Poor			
Heat Type	(=) 07 Space Heater, 08 No Heat			
Improvement Appraisal Value	Improvement < $50,000			

Weekly and Monthly Performance Reporting

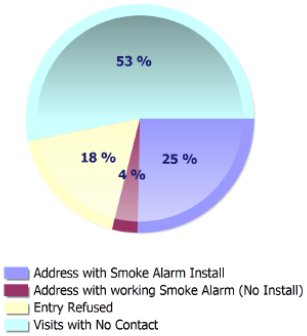
Smoke Alarm Inititative Project

Monthly Report

(Report run date :1/2/2018 9:16:09 AM)

	Total	
	December 2017	YTD
# Addresses Visited	365	2,793
# Address with Smoke Alarm Install	92	730
# Smoke Alarm Installed	136	1,107
# Address with working Smoke Alarm (No Install)	13	174
# Entry Refused	65	421
# Visits with No Contact	193	1,413
Installed Smoke Alarms Cost ($13.29 each)	$1,807.44	$14,712.03

Total Addresses Visited Last Month: 365

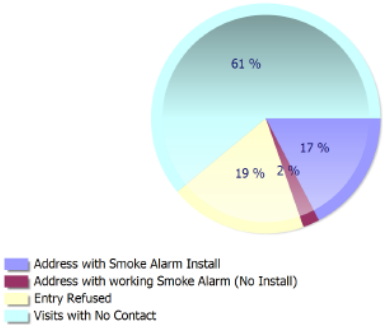


Address Visited by Requestor Type

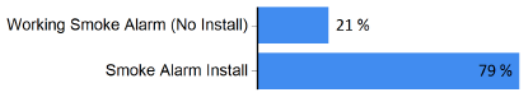
Risk Assessment

	Risk Assessment		Non Risk Assessment	
	December 2017	YTD	December 2017	YTD
# Addresses Visited	301	2,049	64	744
# Address with Smoke Alarm Install	52	397	40	333
# Smoke Alarm Installed	78	606	58	501
# Address with working Smoke Alarm (No Install)	7	108	6	66
# Entry Refused	58	363	7	58
# Visits with No Contact	183	1,142	10	271
Installed Smoke Alarms Cost ($13.29 each)	$1,036.62	$8,053.74	$770.82	$6,658.29

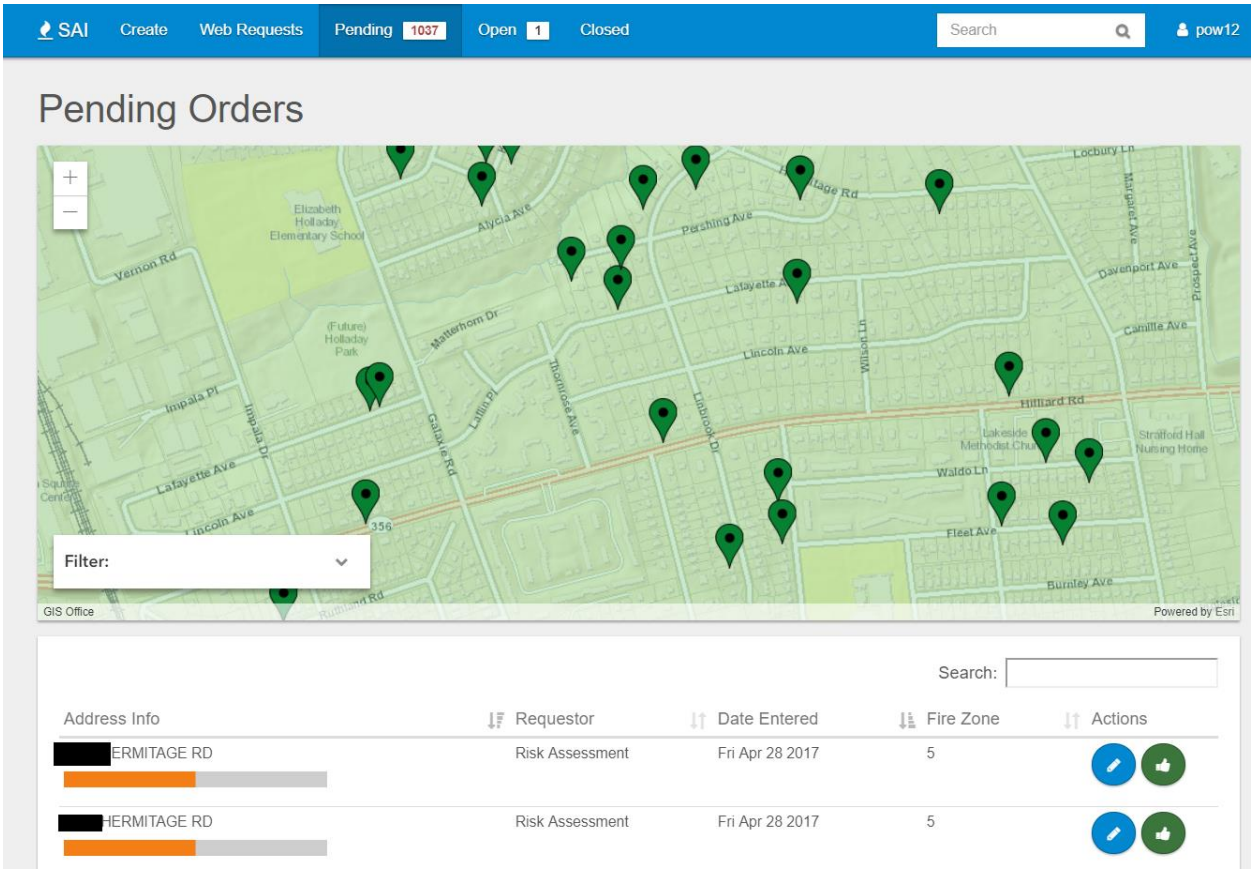
Risk Assessment Address Visited Last Month: 301



YTD Risk Assessment Validity



Pending Risk Assessment Addresses:



Henrico Smoke Alarm Initiative

2017 Program Summary

The Henrico Smoke Alarm Initiative was developed and implemented in Spring 2017. By June 1, light-duty firefighters were knocking on doors and installing alarms. By the last quarter of calendar year, consistent teams were deployed daily and the program was running efficiently.

Unlike any other program in the United States, the Henrico Smoke Alarm Initiative uses specific data for workload efficiency and performance measurement. The program's technology is map-centric and directly tied with the firefighter's dispatch software. Since implementation, every alarm installed in the County is recorded using available technologies on mobile devices.

The developed processes, technology solutions, and initial 1,100 alarms were all secured through internal resources, external partnerships, and incurred no direct cost to tax-payers.

Program Highlights:

- 3,243 – Targeted addresses generated by the 2017 risk assessment
    - 54% - Homes equipped with air conditioning
    - $108,700 - Median home value
- 2,793 – Addresses visited by Division personnel in 2017
    - 50.4% - No one was home – These homes will be revisited in 2018.
- 79% - Year-end risk assessment validity score
    - Of those who were home, 79% were without a working alarm.
- $2,775 – Minimum monthly funding required for sustainability