

## APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2017.** Please include this application form with electronic entry.

### PROGRAM INFORMATION

**County:** County of Henrico

**Program Title:** The Zika Working Group and Pick-a-Day to Fight-the-Bite Initiative

**Program Category:** Health & Human Services

### CONTACT INFORMATION

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### SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

**Name:** John A. Vithoukias

**Title:** County Manager

**Signature:** 

## **1. Program Overview**

The 2014-2015 emergence of Zika virus in South America was recognized by the Henrico County Standing Water Initiative (SWI) and the Henrico County Health Department (HCHD) as a potential health threat to Henrico residents. In February 2016, a partnership was formed between the SWI, HCHD, and the Henrico County Division of Fire (DOF) to share information and updates and to increase situational awareness about Zika. As Zika transmission spread through Central America, so did Henrico's Zika preparations. Bi-weekly meetings between the SWI, HCHD, and DOF expanded to incorporate a total of nine Henrico County departments. Eventually, representatives from the City of Richmond and the counties of Chesterfield and Hanover were incorporated. The newly formed Zika Working Group (Working Group) developed a Henrico Zika Preparedness and Response Plan to promote active Zika awareness and education among all residents in the Central Virginia area.

The Working Group established a Unified Command structure using Incident Command System templates and guidance from the DOF; created and organized sub-committees based on technical and functional capabilities; developed and disseminated educational materials that focused on a unified message of "Pick-a-Day to Fight-the-Bite"; trained community instructors and volunteers; and organized (and staffed) numerous outreach programs. The implementation of a formal Response Plan, a Unified Command structure, and community outreach effectively increased awareness about and may have mitigated the potential for local Zika virus transmission.

## **2. Problem/Challenge/Situation Faced by Locality**

In late 2014 and early 2015, Zika virus rapidly spread throughout Brazil and Central America. In just a few months, the virus went from relative obscurity to front-page news as scientists and clinicians began to associate Zika with an unusual increase in fetal and infant microcephaly and

other adverse birth outcomes. Soon thereafter, travel-associated (imported) cases of Zika spread to the United States escalating concern and generating a surge in the need for mosquito awareness and control.

The Asian tiger mosquito, the most common nuisance and the number one complaint-generating mosquito in Henrico County, is a possible vector for the spread of Zika virus. These mosquitoes lay their eggs in water-filled artificial containers commonly found in backyards (e.g., tires, flower pots, tarps, buckets, etc.). There is a high volume of suitable Asian tiger mosquito habitat throughout the county. Zika virus is primarily transmitted to people through the bite of an infected mosquito. Local Asian tiger mosquitoes can become infected after biting an infected human. These newly infected mosquitoes can then pass the virus to another person, potentially resulting in local Zika virus transmission. Although there is no evidence of local Zika transmission in Henrico County, it remains a viable threat.

The SWI, HCHD, DOF, and other departmental partners needed to devise an integrated approach to deliver accurate and consistent information given mounting public concern. As travel-associated Zika cases were being reported in the U.S., the Working Group felt a legal and moral responsibility to respond proactively. A comprehensive “Pick-a-Day to Fight-the-Bite” initiative was devised to increase Zika awareness, education, resource mobilization, and virus containment measures.

### **3. How Program Fulfilled Awards Criteria**

The implementation of the Zika Working Group and its associated initiatives led to the enhancement of inter-governmental relations, which effectively strengthen efforts to better protect Henrico residents from Zika infection. Collaborative endeavors have not only improved the taxpayers’ understanding of an evolving potential threat but also laid the framework for future

responses to public health issues. Henrico has been recognized throughout Central Virginia for pioneering a proactive plan that focuses on resourcefulness and inter-agency collaboration to educate and mobilize a volunteer, county resident workforce to enhance the prevention of Zika virus transmission.

#### **4. How Program Was Carried Out**

The Working Group was created from a collaborative relationship between SWI (Henrico Department of Public Works), the HCHD, and the DOF. The Group's objective was to create organized partnerships that would work to reduce the impact of Zika virus. Meetings and educational outreach began in February 2016, and lasted through October 2016. The Working Group reconvened in February 2017. Partners met on a bi-weekly basis, and meetings quickly expanded to incorporate a wide range of Henrico County Departments including Public Relations/Media Services; Public Safety; the County Manager's Office; the County Attorney's Office; Community Maintenance, Henrico County Schools; and the Extension Office. Regional representatives from nearby City of Richmond and Chesterfield and Hanover counties also attended. The Virginia Department of Health facilitated science-based instruction and training sessions resulting in the unified implementation of a comprehensive knowledge base. Working Group members were congenial and diligent creating an atmosphere that was productive and capable of complying with deadlines.

The Incident Command System (ICS) and accompanying Unified Command was executed. The Unified Command Organizational Chart allowed county departments with different legal, geographic, and functional authorities and responsibilities to effectively work together.

Working Group goals included:

- Reduce the impact of Zika in Henrico County.

- Maintain constant situational awareness using science-based resources from local and regional partners, Virginia Department of Health, and CDC.
- Educate the Henrico community about Zika disease, transmission, and prevention.
- Enhance outreach to vulnerable populations.
- Support integrated mosquito management efforts.

The established goals led to the development of the Henrico Zika Preparedness and Response Plan/Incident Action Plan. Incident Action Plans (IAPs) were generated using templates and guidance from the DOF, and IAPs directed all Working Group assignments. Group actions and accomplishments included, but were not limited to, the following:

- Development of the “Pick-a-Day to Fight-the-Bite” Zika virus flyer (Figure 1).

This primary outreach document was distributed to 93,000 Henrico County households as an insert in utility bills. The flyer was shared at all community and educational events, and the message was printed on 168,000 Kroger pharmacy prescription bags. Larger “Pick-a-Day to Fight-the-Bite” posters were formatted in English, Spanish, and Arabic for display in schools, libraries, and other county venues.

- Creation of a Train-the-Trainer and volunteer recruitment program.

The Working Group established a workforce composed of Medical Reserve Corps, Community Emergency Response Team, and Master Gardener volunteers. All volunteers were trained to provide Zika presentations, manage questions, and participate in door-to-door communication with Henrico County residents.

- Completion of the “Fight-the-Bite Today” Zika Outreach Event.

The Working Group organized and ran a public education event centered on Zika virus transmission and prevention (Figure 2). This and other similar events provided residents with mosquito repellent free-of-charge. Event outreach and effect was analyzed through

an After-Action Report/Improvement Plan based on feedback from event staff. This plan will assist with similar future events.

- Communication of Situational Reports.

Weekly reports were sent to Working Group members and the County Manager (Figure 3). Each report provided a quantitative summary of Zika cases in the U.S and Virginia, mosquito samples collected, human blood tests submitted, outreach events conducted, and volunteer participation. Also, outreach event status and target population updates were included.

- Institution of the Virginia Department of Health Tabletop Exercise and the Henrico County Zika Task Force (ZTF) Permissions and Logistics Tabletop Exercise.

Exercises prompted discussion and simulation of real-time Zika emergence scenarios to effectively expose potential operational errors and establish focus.

- Generation of weekly social media updates.

Facebook and other web-based media platforms were maintained providing continuous information on Working Group activities, Zika news, and current CDC recommendations.

- Distribution of Zika prevention pregnancy tool kits.

Vulnerable populations were targeted to provide Zika safety and transmission prevention information. Tool kits containing Zika education materials and insect repellent were distributed through HCHD's Maternity Clinic, Family Planning Clinic, and WIC Program. Also, local OBGYNs and medical practices were provided with tool kits.

- Facilitation of complimentary mosquito inspections.

SWI provided residential property inspections in response to citizen requests. Staff identified potential Asian tiger mosquito egg-laying sites on private and county properties. Citizens were educated about mosquitoes, Zika, and sanitation practices (e.g., source reduction). Also, recommendations for citizen-driven control techniques were provided.

- Public Communication through HCTV (Henrico County's cable television channel) and local broadcast news.

The Working Group established and delivered unified Zika messaging to target all Henrico County communities.

- Collection and testing of local mosquito and human blood samples.

In 2016, HCHD submitted blood and urine specimens from 110 people for Zika virus testing through the Division of Consolidated Laboratory Services (DCLS). Most specimens were from pregnant women. Also, Henrico SWI submitted weekly mosquito samples to the DCLS for Zika testing.

## **5. Financing and Staffing**

All Working Group costs were operational; no capital costs were incurred. Since local transmission did not occur, tracked costs included expenditures for prevention materials (e.g., education materials, repellent, advertising, translations, etc.). The total cost for the calendar year 2016 was approximately \$36,000 between state and county funds. All systems, contracts, and services used were already part of existing infrastructure. Staff time was not tracked as most time spent came from employees working in their normal roles regardless of the Working Group (Health Director, Epidemiologist, Emergency Planner, MRC Coordinator, Standing Water Initiative team). This effort was collectively streamlined with the use of ICS principles. For calendar year 2017, more effort will be placed in determining the cost of needed personnel and resources in the event of local Zika virus transmission.

## 6. Program Results

Success is generally measured by achieving pre-determined objectives. The Working Group not only attained all objectives but also exceeded expectations by finishing the 2016 mosquito season with measurable results and a well-defined plan for addressing Zika-related issues in the future.

Achievements include:

- Created a Volunteer Workforce.

The Working Group established a fully operational volunteer workforce that consisted of 92 volunteers. Volunteers committed 410 work hours to outreach and education events. This amounted to a monetary value of \$10,696.90, based on an hourly rate of \$26.09.

- Heightened Public Safety.

- a. With an active Response Plan in place, Henrico County can fully mobilize and begin all Zika prevention and/or containment operations in less than 24 hours.
- b. The Working Group distributed 800 bottles of insect repellent, free-of-charge, to Henrico County residents.
- c. 158 human (blood) samples were submitted for Zika testing during the 2016 operational period. Testing is ongoing.
- d. 146 samples, containing 6,535 Asian tiger mosquitoes, were submitted to DCLS for Zika testing. All results were negative. Testing will resume in 2017.

- Established and expanded outreach events and efforts.

Teams of trained partners and volunteers developed and facilitated 61 outreach events and projects, which successfully created new relationships within communities.

- Increased intra-county awareness through education.

Working Group members developed a working knowledge of Zika, Asian tiger mosquitoes, the steps necessary for prevention and/or containment, and effective ways to



communicate subject content with the public. Skills and knowledge gained were effectively shared with other county departments through newsletters, presentations, and weekly situational reports. The availability of information at all levels of the county government guaranteed heightened awareness and an increase in employee capability.

- Expanded professional competency.

Zika and mosquito information, data, and literature were discussed, analyzed, and debated in bi-weekly meetings that often lasted 2-3 hours per session. The Working Group acquired subject-matter professional competency through a series of specialist-led educational seminars.

- Established a fully operational and cooperative Zika working group.

Henrico residents' complaints and requests often result in substantial overlap among responders. The Working Group provided a unified response and information to all Zika-related concerns.

- Effective mosquito treatments to vulnerable areas.

County employees worked diligently to analyze historical mosquito population trends, which enabled prevention efforts to focus on areas most likely vulnerable to local Zika virus transmission. Areas with an elevated risk for Zika mosquito habitats were inspected and treated by the SWI.

## **7. Brief Summary**

The Henrico County Zika Working Group (ZWG) is a collaboration of county departments that share responsibility in reducing the potential impact of Zika virus. The overarching objective of the ZWG is to protect Henrico County residents by delaying and/or preventing local transmission of Zika virus, then, to intervene quickly and efficiently should local transmission occur. The Henrico County Standing Water Initiative (SWI), Henrico County Health Department (HCHD), and

the Henrico County Division of Fire (DOF) developed an integrated approach. Through reliable communication and the introduction of a “Pick-a Day to Fight-the-Bite” Initiative, residents are successfully prepared to help prevent Zika virus. The Initiative focuses on maximizing education and outreach, providing timely and accurate information, coordinating community events, facilitating mosquito surveillance, site inspections, and laboratory diagnostics, and providing residents with effective mosquito protection practices.

The ZWG established a Unified Command which allowed county partners to develop and implement the Henrico Zika Preparedness and Response Plan/Incident Action Plan. The execution of Plan objectives resulted in measurable results, including the establishment of a volunteer workforce, new safety protocols, outreach and education guidelines, increased professional competency, and profound awareness of Zika-related issues.

The collaborative efforts of ZWG partners has enriched and strengthened county services and relationships, thus affording residents increased protection.

FIGURE 1.  
PICK-A-DAY TO FIGHT-THE-BITE  
ZIKA VIRUS FLYER

# Zika Virus Disease (Zika)

## What is it?

Zika is a disease spread primarily by mosquitoes. Some infected people get mild symptoms such as fever, rash, red eyes or joint pain for about a week. However, four of every five people who get Zika won't have symptoms and won't know they have it. There is no vaccine or medicine for Zika.

## Where is it?

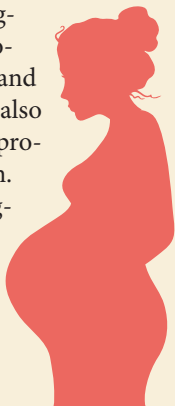
Zika is widespread in South and Central America, Mexico and the Caribbean. It has the potential to become established in the United States.

One of the mosquitoes that is capable of spreading the virus, the Asian tiger mosquito, is found throughout Virginia and Henrico County.

## Special concerns for pregnant women

Zika can be spread from mother to child if a woman becomes infected with the virus while pregnant. Infection during pregnancy has been linked to microcephaly, a serious birth defect, and other problems in babies. Zika also can be transmitted through unprotected sex with an infected man.

If you or your partner is pregnant and you have traveled to a Zika-affected area, please talk to your doctor or call the Henrico County Health Department at (804) 501-5216.



**Info: search "Zika" at [henrico.us](http://henrico.us)**

# Pick-a-Day to Fight-the-Bite!

Zika potentially could be spread by the Asian tiger mosquito, the most common nuisance mosquito in Henrico County. For this to happen, a local mosquito would need to bite a person infected with Zika.

Asian tiger mosquitoes, marked by distinctive black and white striping, prefer to bite during the day and will enter homes through open doors and windows or holes in screens. They lay eggs only in containers of water, not in ponds, puddles, ditches or swamps.

If Asian tiger mosquitoes are biting you, they likely hatched on or near your property. Take steps to control their spread and prevent bites.

## **Step 1:** **Pick-a-Day to Fight-the-Bite!**

Once a week, inspect your property and empty, dump, turn over or throw out items that hold water such as tires, tarps, buckets, birdbaths and toys.

## **Step 2:** **Cover up!**

Wear long-sleeved loose fitting shirts and long pants.



## **Step 3:** **Wear insect repellent!**

Use Environmental Protection Agency (EPA)-registered products.

**Info: (804) 226-6453 or  
search "mosquito" at [henrico.us](http://henrico.us)**

FIGURE 2.  
FIGHT-THE-BITE TODAY  
EVENT ADVERTISEMENT

# Fight-the-Bite TODAY

Prevent mosquito bites & breeding sites  
with Henrico!

Sat. August 27, 2016

8 a.m. - 4 p.m.

Fairfield Middle School  
5121 Nine Mile Rd. 23223

**Free EPA-Registered  
insect repellent**  
Two per family

**Receive Zika health  
information**  
Virus & pregnancy

**Pick-a-Day to Fight-the-  
Bite demonstrations**  
Mosquito control

**Connect with  
community partners**  
Henrico Police & Fire  
Local hospitals

**Supported by**



powered by: [Piktochart.com](http://Piktochart.com)

FIGURE 3.  
HENRICO ZIKA UNIFIED COMMAND  
SITUATION REPORT



## Henrico County Zika Unified Command

### SITUATION REPORT #20

Time: **1100**

Date: **10/28/2016**

Incident: 2016 Zika Preparedness and Response

*Operational Phase 2 – Mosquito Season*

**New information in bold**

Item #	Item	As of 10/28/2016	Location/brief synopsis of issue (elaboration to be located in NOTES)
1	Confirmed and probable cases of Zika <ul style="list-style-type: none"> <li>• In U.S.</li> <li>• In Virginia</li> <li>• In VDH Central Region</li> </ul>	<b>4,091 (+75)*</b> 87 15	<b>*139/4,091 (+2) are locally-acquired cases in Florida</b>
2	Requests approved for testing in Virginia <ul style="list-style-type: none"> <li>• Pregnant</li> <li>• Non-pregnant</li> </ul>	<b>1,859 (+55)</b> <b>1,395 (+45)</b> <b>464 (+10)</b>	
3	Specimens submitted for testing <ul style="list-style-type: none"> <li>• By HCHD based on provider location</li> <li>• For Henrico County residents</li> </ul>	<b>158 (+2)</b> <b>95 (+1)</b> <b>63 (+1)</b>	
4	Zika Outreach Events/Efforts	<b>61 (+2)</b>	See notes below
5	MRC Volunteers Participation	<b>92 (+8)</b>  <b>410 hours</b>  <b>\$10,696.90</b>	<i>This number reflects the number of times MRC volunteers have participated in outreach events. Individual volunteers may be counted multiple times.</i>  <i>This is the number of hours MRC volunteers worked on Zika outreach and education efforts.</i>  <i>This number reflects the monetary value of MRC volunteer support. This total is calculated using an hourly rate of \$26.09 over a total of 410 volunteer hours.</i>
6	Asian Tiger Mosquitoes Collected	<b>17,808 (+307)</b>	

Report filed by: David Calkins, Planning Section Chief

#### NOTES:

- **146** pools of mosquitos from Henrico have been delivered to date to DCLS for Zika testing. All have come back negative. **One pool will be retested next week because of invalid sample processing.**
- Supplemental dispensing of mosquito repellent continues. Standing Water Initiative will be providing insect repellent free-of-charge to Henrico residents that file mosquito complaints.
- **This will be the final situation report for this operational period.**

- As noted in #4 and #5 above, Henrico County has coordinated or participated in the following Zika Outreach Events/Efforts:

No	Date	Event/Effort	Audience	Materials Disseminated	Approx. Population Reached	MRC Volunteers Participating
4	Ongoing	Zika Train-the-Trainer	MRC/CERT	Outreach PPT		36
5	Ongoing	Zika Outreach for Henrico WIC – East End	Henrico County WIC Clients – East HHD (Laburnum Ave.)	Zika Flyers and Education	80	2
6	Ongoing	Zika Outreach for Henrico WIC – West End	Henrico County WIC Clients – West WIC Office (Shrader Road)	Zika Flyers and Education	80	2
	Ongoing	Supporting Chickahominy Health District	Chickahominy Health District partners	Outreach PPT		
60	10/22/2016	Health Fair for Asian American Society of Central Virginia	Henrico County residents	Zika Flyers, Education, and mosquito repellent	100	6
61	10/25/2016	Zika Presentation at Marywood Apartments	Residents of Marywood Apartments	Zika Presentation and Flyers	2	2
<b>TOTALS</b>					<b>Est. 331,381*</b>	<b>92**</b>

\*Total may include overlap among various outreach events and efforts.

\*\*This number reflects the number of times MRC volunteers have participated in outreach efforts. Individual volunteers may be counted multiple times.