



COMMONWEALTH of VIRGINIA
Department of Emergency Management

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MEMORANDUM

TO: The Honorable L. Scott Lingamfelter, Chair, House Militia, Police and Public Safety Committee
The Honorable Frank M. Ruff, Jr., Chair, Senate Committee on General Laws and Technology

VIA: The Honorable Brian J. Moran, Secretary of Public Safety and Homeland Security

FROM: 
Dr. Jeffrey D. Stern, State Coordinator *on behalf of* The Honorable Terence R. McAuliffe, Governor

SUBJECT: Virginia Department of Emergency Management 2015 Virginia Emergency Response Team Exercise After-Action Report

In accordance with § 44-146.17:2 of the *Code of Virginia*, I am pleased to submit the Virginia Department of Emergency Management 2015 Virginia Emergency Response Team Exercise After-Action Report on behalf of Governor McAuliffe. Please contact me if you have questions or need additional information concerning this report.

JDS/mmp

Enclosure

VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT

2015 Virginia Emergency Response Team Exercise (VERTEX) After-Action Report

§ 44-146.17:2

November 2015

Administrative Handling Instructions

The title of this document is the Virginia Department of Emergency Management (VDEM) 2015 Virginia Emergency Response Team Exercise (VERTEX) After-Action Report.

For more information about this exercise, please consult the following individual:

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Preface

An Act to amend the *Code of Virginia* by adding a section numbered 44-146.17:2, relating to the Emergency Services and Disaster Law; annual statewide drill, was approved April 12, 2004 (Title 44 - Military and Emergency Laws). It reads as follows,

The Governor shall conduct an annual statewide drill on response to a large-scale disaster including, but not limited to, electrical power outages. Such drill shall include the participation of local governments, affected state agencies, public utilities, law-enforcement agencies, and other entities as determined by the Governor. The Governor shall submit a report to the General Assembly on the results of the drill by November 30 of each year. The report shall be delivered to the chairs of the House Committee on Militia, Police and Public Safety and the Senate Committee on General Laws.

This report describes the objectives of the drill, conducted in March 2015, and provides information on how the exercise was designed. In addition, it provides the outcomes of the drill, including opportunities for improvement.

Executive Summary

On March 11, 2015, the Virginia Department of Emergency Management (VDEM), with support from Federal Emergency Management Agency (FEMA) Region III, conducted a Homeland Security Exercise and Evaluation Program (HSEEP) tabletop exercise. The purposes of this hurricane response tabletop exercise were (a) to examine the ability to coordinate and deliver required capabilities across multiple jurisdictions to affected communities in the aftermath of a catastrophic hurricane, and (b) to increase awareness and understanding of existing federal and state response and recovery capabilities in accordance with existing doctrines, plans, policies, and procedures.

The annual Virginia Emergency Response Team Exercise (VERTEX) was intended to prepare the Commonwealth of Virginia for potential threats by measuring current capabilities, policies, and procedures against the requirements to properly respond to, and recover from man-made and natural disasters impacting the Commonwealth. The overarching purpose of the 2015 VERTEX was to conduct an exercise that engaged the whole community with the Commonwealth. Built on the scenario posed in the 2014 VERTEX series, the exercise created the basis for transitioning from response to short-term recovery from a hurricane

The exercise involved over 140 participants representing federal and state agencies, local jurisdictions from the Hampton Roads region, and nongovernmental organizations. It was conducted through a combination of plenary and breakout discussion sessions.

The following key themes emerged from the exercise discussions:

- Participants from FEMA Region III understood their roles and responsibilities to support life-safety and life-sustaining needs following hurricane landfall, in accordance with the FEMA Region III Hurricane Plan.
- Participants from VDEM and agencies supporting emergency support functions understood their roles and responsibilities and identified priorities after hurricane landfall and during transition to recovery, in accordance with the Commonwealth of Virginia Emergency Operations Plan (COVEOP) and the Virginia Emergency Response Team (VERT) standard operating procedures.
- The Hampton Roads region is too large a geographic area for VDEM and FEMA to treat as a single entity and still effectively and efficiently manage and deploy assets to support response operations. Participants suggested that the region be divided into sub-regions for operational coordination purposes, based on geographic divisions and intra-governmental relationships.
- Participants recognized the need to further understand the cascading effects and interdependencies affecting critical infrastructure. For example, reestablishing the power grid is dependent on clearing debris from roads so that power companies can gain access to restore power lines and transformers. In addition, the water supply and sanitation system requires electricity, which can be maintained with generators. However, participants were concerned about the ability to refuel the generators, a process that relies on debris removal

from roads to clear access to pumping stations and on prioritization of the limited fuel supply coming to the region.

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EXERCISE SERIES OVERVIEW

Exercise Name	VDEM-FEMA Hurricane Response and Recovery Tabletop Exercise (VERTEX) 2015
Exercise Date	March 11, 2015
Scope	This exercise is a scenario-driven discussion involving federal, state, and local agencies. The scenario requires coordination among various jurisdictions to deliver required services and resources to affected communities in the aftermath of a catastrophic hurricane.
Mission Area(s)	Response and Short-term Recovery
Core Capabilities	<ul style="list-style-type: none">• Infrastructure Systems• Mass Care Services• Mass Search and Rescue Operations• Operational Coordination• Public Health and Medical Services
Threat or Hazard	Hurricane, Post Landfall
Sponsors	U.S. Department of Homeland Security, FEMA Region III, and Virginia Department of Emergency Management

OBJECTIVES

- **Objective 1:** Evaluate the ability of the Federal Emergency Management Agency and other federal agency partners to support life-safety and life-sustaining needs post hurricane landfall, based on pre-positioned federal resources.
- **Objective 2:** Validate the Commonwealth of Virginia Emergency Operations Plan and the FEMA Region III All-Hazards Plan/Hurricane Annex during the operational period immediately following a Category 3 hurricane landfall.
- **Objective 3:** Validate the ability of the Virginia Emergency Response Team to transition from response to short-term recovery in accordance with VERT standard operating procedures.

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NUMBER OF ATTENDEES

Over 140 exercise participants

PARTICIPATING ORGANIZATIONS

The following federal, state, and local agencies attended the 2015 VERTEX exercise.

Federal Agencies/Private Non-Profits	State Agencies	Localities
<ul style="list-style-type: none"> • Environmental Protection Agency • Federal Highway Administration • FEMA National Exercise Division • FEMA Region III • National Oceanic and Atmospheric Administration • U.S. Air Force • U.S. Army • U.S. Army Corps of Engineers • U.S. Coast Guard • U.S. Navy • U.S. Department of Defense • U.S. Department of Health and Human Services • U.S. Department of Homeland Security, Office of Cyber and Infrastructure Analysis • U.S. Department of Homeland Security, Office of Emergency Communications • U.S. Department of Homeland Security, Office of Infrastructure Protection • U.S. Department of Justice • U.S. Department of Transportation • U.S. General Services Administration • American Red Cross • Old Dominion University • Port of Virginia • Voluntary Organizations Active in Disasters 	<ul style="list-style-type: none"> • Deputy Secretary of Public Safety and Homeland Security • Virginia Cooperative Extension/Virginia Polytechnic Institute and State University • Virginia Department of Agriculture and Consumer Services • Virginia Department of Emergency Management • Virginia Department of Environmental Quality • Virginia Department of Fire Programs • Virginia Department of Forestry • Virginia Department of General Services • Virginia Department of Health • Virginia Department of Health, Office of Emergency Medical Services • Virginia Department of Military Affairs • Virginia Department of Rail and Public Transportation • Virginia Department of Social Services • Virginia Department of Transportation • Virginia Information Technology Agency • Virginia State Police 	<ul style="list-style-type: none"> • City of Chesapeake • City of Hampton • City of Virginia Beach • County of Gloucester • County of Isle of Wight

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SCENARIO

MODULE I: “FIRST BLUE SKY”

Today, June 29, 2015 is the first clear day following the impact of Hurricane Grace. Hurricane Grace made landfall as a Category 3 storm with maximum sustained winds of approximately 120 miles per hour. The storm progressed slowly across the area and delivered higher-than-expected rainfall amounts. Combined with storm surge, this resulted in severe flooding throughout coastal Virginia. Storm surge along the coastal areas was consistent with existing inundation maps for a storm of similar strength. Although evacuation orders were given, local emergency management officials report that a significant number of people refused to leave and are now trapped by floodwaters. As reports of damage come in, it becomes clear that the storm has left a swath of major flood damage throughout southeastern Virginia. When safe, first responders will begin to gain access to some areas that were damaged and isolated by flooding and other storm impacts.

It is being reported that 543 people are missing with 61 confirmed fatalities. Additionally, healthcare facilities are reporting over 1,600 initial storm-related injuries, which are overwhelming the healthcare community. The Hampton VA Medical Center and the Riverside Regional Medical Center received extensive damage; current operating status is unknown. Additionally, an undetermined number of survivors needing at-home medical care may require “door-to-door” care assessments.

Numerous gas stations do not have power or were damaged as a result of the storm and cannot provide fuel. Individual households and facilities using back-up generation power will be dangerously close to running out of fuel in the next 48 hours.

A number of individuals and families have taken shelter in refuges of last resort and require additional information on shelter locations. Local shelters have been operating at full capacity. Many are overcrowded with residents and travelers and, because of the storm, are not able to move people to other shelters to reduce overcrowding. Security and access and functional needs are not being met at some facilities. The current state-managed shelters are running at or over capacity with an anticipated 25,326 individuals seeking immediate shelter for themselves as well as 8,824 household pets.

Current Impacts to Critical Infrastructure

- **Bridges and Roadways**
 - Monitor-Merrimac Memorial Bridge-Tunnel is closed and received minor damage to outside infrastructure.
 - Hampton Roads Bridge-Tunnel is damaged because of storm surge flooding in the tunnel.
 - Chesapeake Bay Bridge-Tunnel, Midtown Tunnel and Downtown Tunnel are in need of a damage assessment before they can be reopened.

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- Major sections of Route 17 and Interstates 64, 264, and 664 are closed because of debris as well as damage from storm surge throughout the Hampton Roads peninsula area.
- **Aviation**
 - Norfolk International Airport received extensive damage and is inoperable because of damage to the runway and radar/control tower.
- **Railways**
 - Main railways into Norfolk, Williamsburg, and Newport News received major damage due to flooded and submerged infrastructure.
 - All Amtrak and CSX services past the City of Richmond into Hampton Roads have been suspended.
- **Port Operations**
 - The Port of Virginia is closed with extensive damage to the Norfolk International, Newport News Marine, and Portsmouth Marine terminals because of the extensive amount of floating and submerged debris caused by storm surge that is blocking navigation channels in the port.
- **Communications**
 - Cellular service is down in the Hampton Roads area and service is disrupted in the surrounding areas. Landline service is also affected, including public safety answering points (PSAPs), which impacts survivors' ability to call 9-1-1.
- **Utilities**
 - It is estimated that there are approximately 3,800 broken utility poles, 4,100 snapped cross arms and over 9,000 spans of downed power lines in need of repair to restore power to the affected area. Currently, 1,856,881 customers statewide are without electricity.

MODULE II: "10 DAYS LATER"

As of July 8, 2015, it has been determined that the hurricane had the greatest impact in the Southside Hampton Roads area. Approximately 250,000 people are displaced, including local residents and military personnel living in the region. Those accounted for are staying with unaffected family and friends or in hotels or shelters.

Businesses in the region were also impacted, as many commercial properties were damaged or destroyed. Additionally, 25 percent of homes in the area do not have water. The Hampton Roads Bridge-Tunnel was severely damaged, and requires extensive repairs. Traffic is prohibited from crossing the bridge and is being redirected through the Monitor-Merrimac Tunnel (Interstate 664). An asphalt production facility near the Great Dismal Swamp in Chesapeake sustained damage that caused leakage of asphalt sealant. There is concern about the sealant impacting the swamp.

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Significant repairs have been made to the electrical grid in the last 10 days but, due to access issues and debris removal, 856,881 customers statewide are still without power.

Sub-Regions Housing Damage Estimates	
Southside Hampton Roads	643 homes destroyed; 4,040 major damage
Hampton Roads Peninsula	618 homes destroyed; 4,012 major damage
Middle Peninsula	113 homes destroyed; 707 major damage
Northern Neck	109 homes destroyed; 684 major damage
Eastern Shore	111 homes destroyed; 678 major damage

Local government services, hospitals and schools were heavily affected because of facility damage, relocated staff, or infrastructure damage. This has resulted in challenges in meeting the needs of disaster survivors. State and local officials are providing recovery information to the public via traditional and non-traditional media, but are concerned that the displaced may not be receiving it.

Storm Damage:

- There are 5,431,758 tons of debris that require removal.
- There are 856,881 customers statewide without electricity.
- There are 1,594 destroyed homes.
- There are 10,121 homes with major damage.
- Over 450,000 homes are affected or have minor damage.
- The Hampton Roads Bridge-Tunnel was severely damaged and requires extensive repairs. Traffic is prohibited from crossing the bridge and is being redirected through the Monitor-Merrimac Tunnel (Interstate 664). Due to the significant amount of debris, access into the Virginia Beach area remains difficult by ground.
- The Riverside Regional Medical Center, Hampton VA Medical Center, and Chesapeake Regional Medical Center received significant infrastructure damage resulting in the temporary closure of their facilities until they can be repaired. Due to the lasting power outage, a number of outpatient care facilities (including a dialysis center) are closed. This has significantly reduced the capacity for treatment in the Hampton Roads area.
- Retailers and businesses are closed because of power outages and significant flooding and wind damage. An estimated 105 businesses were destroyed and over 433 damaged; 7,200 businesses received minor damage or were affected.
- Local shelters are operating at full capacity or have had to reduce capacity because of staffing or resource needs. A few shelters have been overrun as other shelters deactivate.

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EXERCISE DESIGN

The 2015 Virginia Emergency Response Team Exercise was designed to build upon the work created during the 2014 Hampton Roads Regional Catastrophic Planning Grant Programs exercise that allowed players to perform tasks related to the events leading up to the landfall of a catastrophic hurricane in Virginia. The 2015 exercise allowed players to discuss the implications of the hurricane after it had made landfall, i.e., the exercise was designed to start on the “first blue sky day” after the hurricane had passed. The VERTEX 2015 Hurricane Response and Recovery Exercise was a seven-hour exercise involving federal, state, and local stakeholders from FEMA Region III and the Commonwealth of Virginia. The exercise comprised two modules focused on immediate response and short-term recovery. Each module included the following breakout groups:

- VERT Command
- Health and Medical
- Infrastructure Assessment and Logistics
- Mass Care and Short-term Housing
- Situational Awareness
- Search and Rescue
- Localities

Each group discussed coordination of response in two modules. Module I discussions focused on pre-staged resources and mechanisms for deployment to meet life-saving and life-sustaining needs. In addition, participants discussed any anticipated shortfalls or additional needed capabilities not already pre-staged in accordance with current plans. Module II focused on short-term recovery operations 10 days after landfall and initial response; specifically, which needs should be addressed for mass care, debris management, fatality management, power, fuel and commodities, medical surge (e.g., when a hospital can no longer support life saving operations and the rest of the system must absorb the influx of patients), public assistance, and re-entry.

CONCLUSION

The goal of VERTEX 2015 was to validate the ability of participating agencies to coordinate and deliver planned services and resources across multiple jurisdictions to affected communities in the aftermath of a catastrophic hurricane. The exercise increased awareness and understanding among participants regarding existing doctrines, plans, policies, and procedures. The exercise focused on the capabilities of operational coordination, infrastructure systems, mass care services, mass search and rescue operations, and public health and medical services.

The exercise successfully captured many strengths and areas of improvement that will be used to improve state, local, nongovernmental, and commercial emergency plans and develop future training and exercise efforts. The Improvement Plan, with recommendations and corrective actions, will help improve the Commonwealth’s whole community response to a hurricane by strengthening emergency response plans, policies, and procedures.