National Capital Region

**2012 Derecho**

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| November 2012 |

**Table of Contents**

**After Action Report**

[Contents 2](#_Toc340046182)

[Executive Summary 3](#_Toc340046183)

[Section 1: Emergency Overview 4](#_Toc340046184)

[Section 2: Analysis of Capabilities 4](#_Toc340046185)

[Section 3: Conclusion 7](#_Toc340046186)

**Executive Summary**

The June 2012 Derecho was one of the most destructive and deadly fast-moving severe thunderstorm complexes in North American history. The Derecho tracked across a large section of the Midwestern United States and across the central Appalachians into the Mid-Atlantic States on the afternoon and evening of June 29, 2012, and into the early morning of June 30, 2012. It resulted in 22 deaths, widespread damage and millions of power outages across the entire affected region. The jurisdictions of the National Capital Region (NCR) were severely impacted. The NCR includes the District of Columbia, the Virginia jurisdictions of the City of Alexandria, Arlington County, Fairfax County, and Loudoun County, and the Maryland jurisdictions of Montgomery County, Prince George’s County, and Prince William County.

About one million customers lost power in Virginia, 68,000 in Washington, D.C., and about 900,000 in Maryland. To better understand the region’s response, NCR state and local emergency managers have compared their AARs for common themes and lessons learned. Reports were surveyed from the Commonwealth of Virginia (VDEM), State of Maryland (MEMA), District of Columbia (DCHSEMA), Arlington County, Fairfax County, Loudoun County, Prince George’s County, Charles County, Montgomery County, and the Cities of Alexandria, Bowie, Fairfax, Manassas and Manassas Park, with a focus on major strengths and areas of improvement.

**Major Strengths**

The major strengths identified during this incident are as follows:

* **Communication**
* **Community Engagement**

**Primary Areas for Improvement**

Several opportunities for improvement in jurisdictional ability to respond to the incident were identified. The primary areas for improvement (as indicated by the number of jurisdictions citing them) are as follows:

* **Situational Awareness (11)**
* **Communications Infrastructure (7)**
* **Emergency Operations Center Management (10)**
* **Power Restoration (5)**
* **Vulnerable Populations (5)**

**Section 1: Emergency Overview**

**Structured Emergency Details**

**Emergency Name**

2012 Derecho

**Internal Number #**

4GFX-OEM-006

**Start Date Duration**

June 29, 2012

**End Date**

July 6, 2012

**Duration**

8 days

**Location**

National Capital Region

**Emergency Type**

Straight-line winds, with telephone and power outages

**Emergency Declarations**

Virginia, Maryland, District of Columbia

**Section 2: Analysis of Capabilities**

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities linked to the 2012 Derecho response are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

Capability 1: Situational Awareness

**Capability Summary:** The US Coast Guard defines Situational Awareness as the ability to identify, process, and comprehend the critical elements of information about what is happening to the team with regards to the mission.

**Observation 1.1:** Emergency managers did not receive sufficient warning considering the size of the storm, and then experienced a variety of issues during the response.

**Analysis:** The National Weather Service issued a special weather statement online at 7:47 p.m., but these statements did not meet the threshold required to set off either a weather radio or other notifications that indicate intense storm activity on the horizon. Emergency managers wanted, but did not always get, timely status updates of the Verizon phone system issue. In addition, in some communities there was difficulty in tracking road closures, dark intersections, and power status of schools and other government buildings (especially cooling centers).

**Recommendations:**

* + - Review and update notification systems and lines of communication with the National Weather Service and other prompting agencies by reconsidering thresholds and information triggers.
    - Work with Verizon to ensure system updates are timely and informative.
    - Focus internally to ensure situational awareness related information is helpful and accurate.

Capability 2: Communications Infrastructure

**Capability Summary:** This capability requires an understanding of the newer communications redundancies in the Verizon system. The general public should be able to call 911 during an emergency or have a reasonable alternative during an emergency. There are also concerns about the 8 hour battery life that homeowners have through Verizon, and their frustrations, since they are being forced away from hard-wired phones.

**Observation 2.1:** The Verizon telephone network failed.

**Analysis:** The single points of failure in the Verizon system have been well-documented in several local and state level reports, and it should be no surprise that communications infrastructure was the top singular issue in the region. The outage spilled over in to a complete loss 911 service in some communities, and a partial loss in others. Even though Verizon has created more robust redundancies in its system, all of the NCR jurisdictions are reexamining their communications redundancies.

**Recommendations:**

* + - Explore and potentially acquire non-Verizon ten-digit numbers to provide the

public an alternate means to report an emergency.

* + - Explore and develop a plan that provides residents more methods and locations to report emergencies.
    - Track Verizon’s progress towards meeting the NCR’s desired improvements.

Capability 3: Emergency Operations Center Management

**Capability Summary:** This capability requires continued efforts to plan, train and exercise in an Emergency Operations Center environment to ensure seamless transition during real world EOC activations.

**Observation 3.1:** Emergency Operations Center (EOC) management and functionality revealed several areas for improvement regarding administration, planning and training in an EOC environment.

**Analysis:** Some entities delayed opening their EOCs until the morning after the storm, and found that earlier activation would have benefitted response efforts. Other communities reported that minor changes, such as setting a more rigid schedule or utilizing Geographic Information System staff, would improve EOC functionality. In addition, several jurisdictions found out-of-date plans. Others, while confident in their plans, brought in staff from different departments, who took some time to adjust to the EOC environment.

**Recommendation:**

* Provide regular WebEOC trainings and exercises.
* Keep planning documents updated to align with EOC functions.
* Cross-train staff from other departments in EOC functionality.

Capability 4: Power Restoration

**Capability Summary:** This capability involves an understanding that power restoration is partially dependent on power companies, states and localities must maintain internal backups systems while finding different ways to work in partnerships with these utilities.

**Observation 4.1:** When significant storm related outages occur, power restoration can create major hardship in communities.

**Analysis:** While the speed of restoration depends on the utility provider, a common issue among local governments is getting local buildings and systems back online. The most common issue among the jurisdictions was related to the maintenance or location of generators.

**Recommendations:**

* Develop or update lists of all county/municipal facilities with emergency generators, with the following information: product (fuel requirement), capacity, burn rate, last reading, date/time of last reading, on-site phone and/or email contact.
* Improve lines of communication between local tree clearing crews and power crews, to foster restoration coordination.
* If not already a practice, add potential cooling (or warming) centers to critical facilities lists.

Capability 5: Vulnerable Populations and Personal Preparedness

**Capability Summary:** This capability relies in part on the ability of local officials to thoroughly discuss preparedness with the community, including unforeseen situations that may arise connected to vulnerable populations.

**Observation 5.1:** Many facilities addressing vulnerable populations (i.e., seniors and functional needs) were not properly equipped for power outages.

**Analysis:** These two themes have a unique relationship to local emergency response. When discussing our vulnerable populations, assisted living, independent living (for seniors), and long term care facilities arise. Functional needs, such as recharging facilities for at-home life sustaining devices, are also discussed. These areas are a very important subset of preparedness actions that necessitate mindfulness among the general public. Localities must also navigate between planning for and helping those who face obstacles in preparedness, and those that choose not to prepare.

**Recommendation:**

* The definition of critical facilities should consider adding certain vulnerable population facilities
* Reliable energy backups need to be part of plans for those facilities where life sustaining equipment is critical to the survival of residents.
* Generators for HVAC systems should also be considered for those facilities with populations vulnerable to extreme heat or cold.
* Shelter plans must consider vulnerable population needs.

**Section 3: Conclusion**

Overall, the 2012 Derecho provided a host of lessons learned that proved to be a valuable learning experience, weighing heavily on the minds of state and local emergency managers as they prepared for and responded to Hurricane Sandy, which affected the region several months later at the end of October. While communication and community engagement proved to be major strengths during the Derecho response, the most significant recommendations for improvement fall under the issue of situational awareness. Other important recommendations concern communications infrastructure, EOC management, power restoration and vulnerable populations. The recommendations outlined in the report above, once implemented, will significantly contribute to the NCR response to a region-wide event like the Derecho. In addition, other secondary issues not addressed in this AAR, including staffing needs, personal preparedness, and debris removal/contractor needs, provide future areas for discussion and improvement.