



Verizon, 911 Service and the June 29, 2012 Derecho

Emergency Preparedness Council

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Update v2



Issue: Failure of one of two back-up generators to start at each of our Arlington and Fairfax central offices following the loss of commercial power caused the Northern Virginia 911 disruptions

Issue	Action Plan	Status
Arlington Maintenance Items	<ul style="list-style-type: none">• Install new start batteries, etc. on Gen 1• Complete Gen 2 repairs• Complete full load transfer test (pending battery tests and run down testing)• Complete fuel system repairs• Update switch gear manual operations Procedure• Resolve UPS bypass cabinet alarm	Complete 6/30/12 Complete 7/01/12 Complete 8/08/12 Complete 7/22/12 Complete 7/02/12 Complete 8/07/12
Fairfax (Lee Hwy) Maintenance items	<ul style="list-style-type: none">• Install a new UPS on the Gen 2 Auto Transfer Switch (this solves the Gen 2 start failure)• Install a permanent Auto Transfer Switch power source from the CO inverter power plant.	Complete 7/19/12



Power

Issue	Action Plan	Status
<p><u>Generator system failures</u></p> <p>Key generator system failures were different in each location. The specific failures have been repaired but we are extending our review of critical locations to address potential issues.</p>	<ul style="list-style-type: none"> Conduct backup power system audits in the mission-critical Verizon facilities supporting 911 in Virginia, Maryland and Washington, D.C. Institute any corrective measures identified in those power audits. We have already completed the Arlington audit and are instituting automated controls to prioritize system loads (e.g., telemetry) in case one of the two generators fails. 	<p>Estimated completion for all locations identified: 10/31/12</p>
<p><u>Emergency Practices and Procedures</u></p> <p>Our investigation determined we could have improved our restoration of service had we (i) recognized more quickly the partial power outage in Fairfax and (ii) been able to power some network equipment (e.g., telemetry systems) on the one generator in Arlington that was working.</p>	<ul style="list-style-type: none"> Develop and post site-specific backup power system assessment procedures that can be used by anyone to assess if there is a loss of power to an area of a building. Develop and post site-specific manual generator start and transfer procedures, including serving system loads on a prioritized basis. Enhance our critical facility “Black Out” testing. We test our back-up power systems regularly but will enhance this testing to include “failed automated controls” and “prioritized system load transfer” scenarios. 	<p>Completed 8/31/12</p> <p>Est 9/30/12</p> <p>Process Document Est 9/7/12; Field Blackout Tests 1Q13</p>



Emergency Management Processes

- Issue: Lack of network visibility hindered communications to PSAPs and other government/local officials. Verizon is working to develop a better design to retain its visibility into the network, which will improve the utility of the communications in the face of catastrophic failures.

Issues	Action Plan
<p><u>Communication and Mobilization</u></p> <p>Verizon has a standard practice of internal mobilization based on actual or potential service impacts. These are triggered by alarms. The loss of visibility prevented us from receiving these alarms and delayed our response.</p>	<ul style="list-style-type: none">• Create two new event criteria for notification and mobilization purposes. We have enhanced our notification and mobilization procedures to trigger activity more quickly when batteries are activated or when telemetry is lost in multiple offices in a geographic area.• Completed 7/20/12
<p>Verizon should adopt, embrace, instruct, train and utilize the National Incident Management System (NIMS) model, to address and mitigate any and all significant events/incidents impacting providing 9-1-1 service to the aforementioned jurisdictions.</p>	<ul style="list-style-type: none">• Verizon's National Emergency Coordination Center (NECC) utilizes the National Incident Management System (NIMS) principles as published by the Department of Homeland Security. Verizon offers internal training and orientation courses on its National Emergency Command Center (NECC) Process, and an Introduction to the National Incident Management System



Verizon Network

Issue: Significantly, during the period while power was out in Arlington, we lost our telemetry systems that enable us to monitor the condition of our network facilities in Northern Virginia, and that loss of visibility over our network hindered our initial efforts to assess and repair damages.

Issues	Action Plan
<p><u>Communication and Mobilization</u> We have a standard practice of internal mobilization based on actual or potential service impacts. These are triggered by alarms. The loss of visibility prevented us from receiving these alarms and delayed our response.</p>	<ul style="list-style-type: none">• Create two new event criteria for notification and mobilization purposes. We have enhanced our notification and mobilization procedures to trigger activity more quickly when batteries are activated or when telemetry is lost in multiple offices in a geographic area.• Completed 7/20/12.
<p><u>Loss of visibility to multiple sites</u></p>	<ul style="list-style-type: none">• Redesign the telemetry network. We are redesigning the telemetry network to include more diverse connections and failover (alternative) locations.• Diversity guidelines for telemetry network published 8/15/12; implementation plan approved and funded.



Issue: Verizon's analysis of the network impacts following the Derecho has identified areas for improvement, especially with ALI and trunk diversity, with specific PSAP configurations. Verizon will work directly with the specific PSAP partners to determine improvements.

Issues	Action Plan	Status
Outages indicated diversity Issues with failed PSAP trunks and ALI links. Conduct network design review for all MD and VA PSAPs.	<ul style="list-style-type: none">Review PSAP and ALI Links for DiversityWork with local Engineering and Operations team to remediate issues (to be scheduled with PSAPs after redesign recommendations are shared and concurred)	Review completed for affected PSAPs and Northern VA 7/31/12 VA Redesign recommendations ready for review 9/7/12 MD reviews to be complete by 9/30/12
911 Infrastructure is not centrally inventoried creating troubleshooting and restoration issues.	<ul style="list-style-type: none">Develop a means to implement and maintain an inventory for E911 Infrastructure .	Technical service managers to retain all network routing maps developed currently. Determine capabilities available in ESP/ETMS ticketing systems to be deployed in 4Q12



Communications

- Issue: The 911 Directors of the City of Alexandria, and the Counties of Arlington, Fairfax, Loudoun, Prince William and Stafford have recommended that Verizon adopt five steps in response to the storm, primarily focused on communications. The recommendations are constructive suggestions, and we look forward to working with the 911 Directors to most effectively implement these concepts. Specifically:

Issues	Action Plan
<p>Verizon adopt, embrace, instruct, train and utilize the National Incident Management System (NIMS) model, to address and mitigate any and all significant events/incidents impacting providing 911 service to the aforementioned jurisdictions.</p> <p style="text-align: center;">Complete</p>	<ul style="list-style-type: none">• Verizon employs an "all hazards approach" to its Business Continuity, Disaster Recovery, Facility Preparedness and Emergency Management programs. These are essential to the protection of its employees, critical business processes and structural facilities located around the globe.• Verizon's National Emergency Coordination Center (NECC) process utilizes the National Incident Management System (NIMS) principles as published by the Department of Homeland Security. Verizon offers internal training and orientation courses on its National Emergency Command Center (NECC) Process, and an Introduction to the National Incident Management System.



Communications

Issues	Action Plan
<p>Verizon obtain and utilize a Reverse 911® type system to notify, via voice and text, those persons identified by the above jurisdictions, as soon it is known or suspected by Verizon that there is or may be an interruption of 9-1-1 service to any or all of the above jurisdictions. The immediately transmitted voice and text message should contain, in plain language, the nature of the problem, current or potential impact of the problem, what Verizon is doing to address the problem, recommend actions the impacted 9-1-1 center(s) should take and other appropriate information and include the name of the sender and the telephone number (business and mobile) at which the sender can be reached, and their email address.</p>	<ul style="list-style-type: none">• Since March 2011, Verizon has employed a broadcast email process to provide specific ticket information to individual PSAPs, and also to provide general information and updates on issues that affect multiple PSAPs. Verizon has selected a tool (Varolii) for broadcast voice and text and will work with 911 Directors to establish the correct contact lists and process details.• Based on experience with the email process, it is evident that there is no one common standard vehicle that is universally desired by all PSAPs. Verizon will work with the 911 Directors to accommodate specific needs within a standard process.• Verizon will make every effort to share actionable information with PSAPs as soon as we are aware of service interruptions. For events that may impact multiple PSAPs, we will recommend that conference bridges will be established to brief PSAPs on the situation and allow for questions and discussion. Recommended actions would be specific to each PSAP (based on their back-up configuration and event impact) and need to be developed jointly between Verizon and the PSAP.



Communications

Issues	Action Plan
<p>Verizon work with the jurisdictions to develop, by no later than December 31, 2012, a method to semi-annually conduct a drill/exercise with each jurisdiction on actions to be taken by Verizon and the impacted jurisdiction(s) in the event of a potential or actual 9-1-1 outage.</p>	<ul style="list-style-type: none">• Verizon will engage the assistance of its Business Continuity Emergency Management (BCEM) team to work with Verizon's 911 Customer Care Center organization to develop and exercise procedures for drills that model potential or actual 911 outages with any of the jurisdictions that request such a joint exercise.
<p>Verizon provide the above jurisdictions, during the first week of each month, a current contact list; beginning with the name and contact information (email, business telephone number, business mobile telephone number and any other appropriate information) for the Verizon account manager assigned to the jurisdiction and four immediately escalating Verizon personnel up to a Vice President level.</p>	<ul style="list-style-type: none">• Completed. Provided to all PSAPs on or before 8/14/2012. <div data-bbox="1219 786 1535 905" style="border: 1px solid black; border-radius: 15px; background-color: #ffffcc; text-align: center; padding: 10px;">Complete</div>



Communications

Issues	Action Plan
<p>Verizon, if/when requested by any of the above jurisdictions, have a Verizon representative with authority to act/react; respond to and to be present at the jurisdictions' Emergency Operations Center (EOC), to provide current accurate information concerning 9-1-1 service and outages, other telephone service, etc. and liaison with other parties staffing the EOC, when the EOC is activated.</p> <p style="text-align: center;">Complete</p>	<ul style="list-style-type: none">• Verizon has committed to partnering with Commonwealth EOC and staffing the EOC in Richmond with Verizon representative in the event of an emergency.• Verizon has discussed options for virtual participation in any EOC via an "instant messaging - like" application with the Virginia Commonwealth emergency management leaders.• Verizon has discussed joint training with Fairfax Emergency Management personnel and would welcome the opportunity to participate in that activity.• If PSAP discussions regarding a joint regional 911 EOC become the strategy, that would present an excellent vehicle for Verizon to be present with multiple jurisdictions in an emergency situation.