



Business Continuity and Disaster Recovery

Verizon Wireless

Emergency Response Capabilities and Preparedness

June 2014



Introduction

Verizon Wireless:

- Largest wireless carrier in the United States
- Invested over \$80 billion to expand and maintain our wireless networks

Excerpts from our credo:

“We have work because our customers value our high-quality communications services”

“We Run To A Crisis, Not Away”

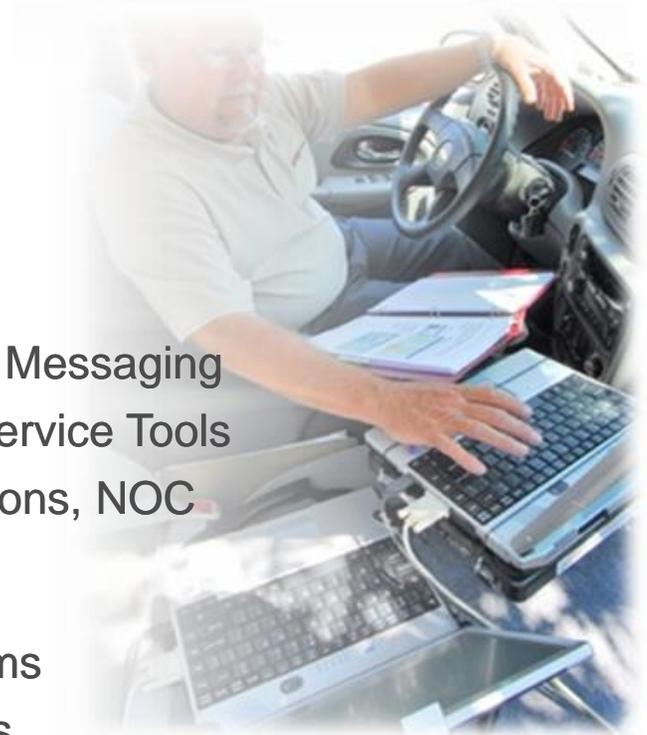




BC / DR Team Activities

Business Continuity / Disaster Recovery Supports Reliability:

- Crisis Management Structure & Training
- Focus on Mission Critical Functions and Systems that Support Customers:
 - Network Systems: Voice & Data, Authentication, Text Messaging
 - IT Systems: Provisioning, Call Center Routing, Self-service Tools
 - Functional Teams: Tech Support, Warehouse Operations, NOC
- Invest in Reliability:
 - Geographically Diverse Locations: Teams and Systems
 - Strict Standards: Engineering, Design and Operations
 - Develop / Test Recovery Plans and Capabilities: Hundreds of annual tests





Crisis Management Structure

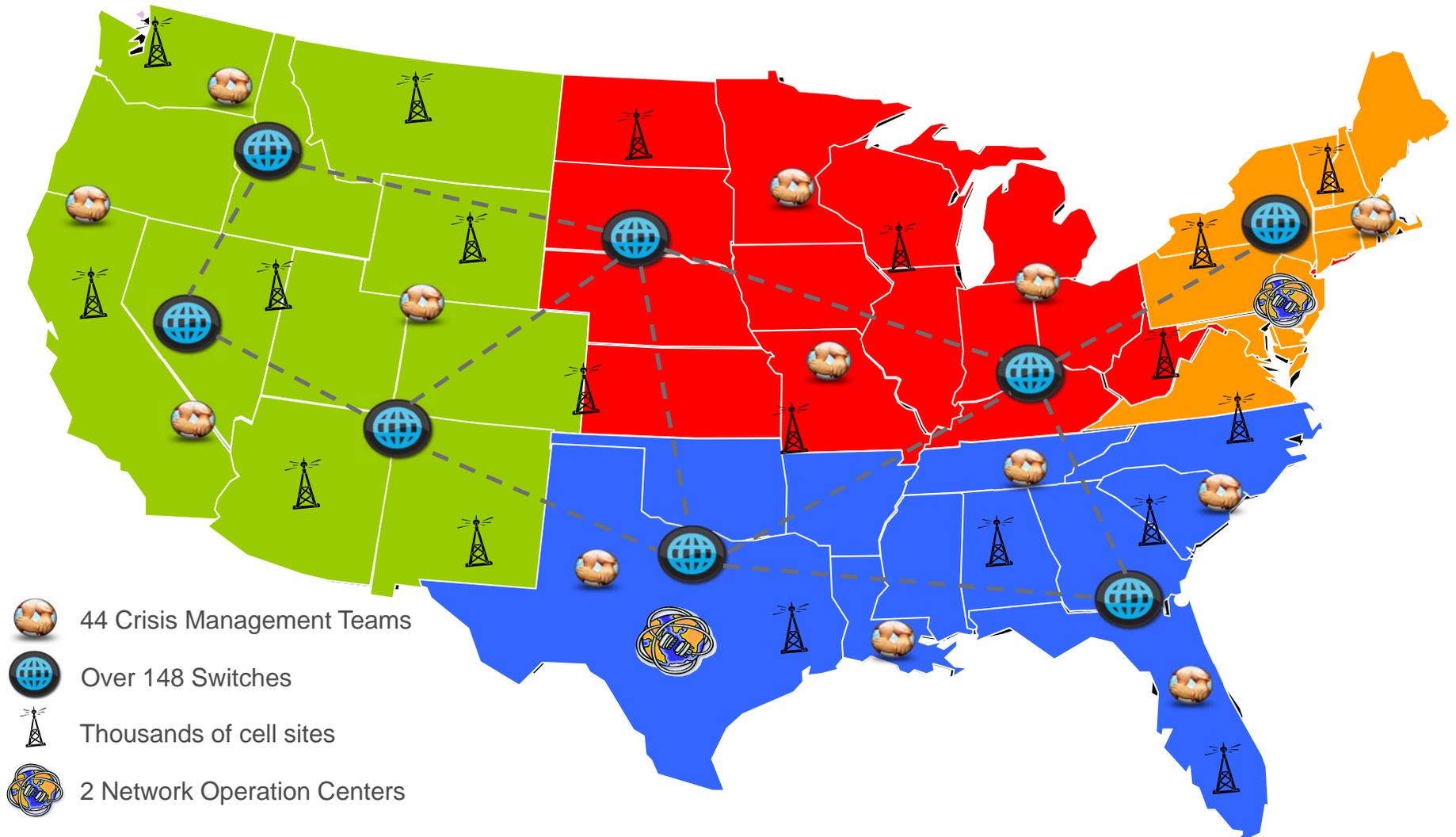
44 Crisis Management Teams (CMTs)

- Led by Senior Management - cross functional command and control
- Local Response by Local Teams - teams support each other
- Emergency Operations Center (EOC) - locations and resources
- Annual team exercises to enhance response capabilities
- Conduit for Customer needs during an emergency
- “Battle Tested”





Network Operations



-  44 Crisis Management Teams
-  Over 148 Switches
-  Thousands of cell sites
-  2 Network Operation Centers



Network Operations

Network Operations Centers (NOCs)

- Located in New Jersey and Texas
- 24x7x365 nationwide monitoring:
 - ✓ Facilities
 - ✓ Cell sites
 - ✓ Switches
- Works closely with regional field operations teams and vendors to coordinate and expedite the restoration of service in the event of outages





Network Operations

Mobile Switching Centers

- Facilities engineered to standards
- Site selection
- Fire detection and suppression systems
- Security systems & guards – restrict unauthorized access
- Back-up batteries – always online
- Back-up generators – systems and HVAC
- Diverse circuit paths – multiple building entrance points
- Disaster recovery plans
- Back-up of system configurations and data





Network Operations



Cell Sites

- Back-up batteries
- Back-up generators – fixed and portable
- Fire detection systems
- Security systems
- Real time monitoring and diagnostic capabilities
- Maintenance and operational procedures, ex. brush clearing



Network Operations

Portable Cell Sites

- Cell on Wheels (COW)
- Cell on Light Truck (COLT)





Network Operations

Back-up power

- Permanent battery and generators at all switches and most cell sites
- Generator on a Trailer (GOAT)
- Load test regularly
- Preventative maintenance



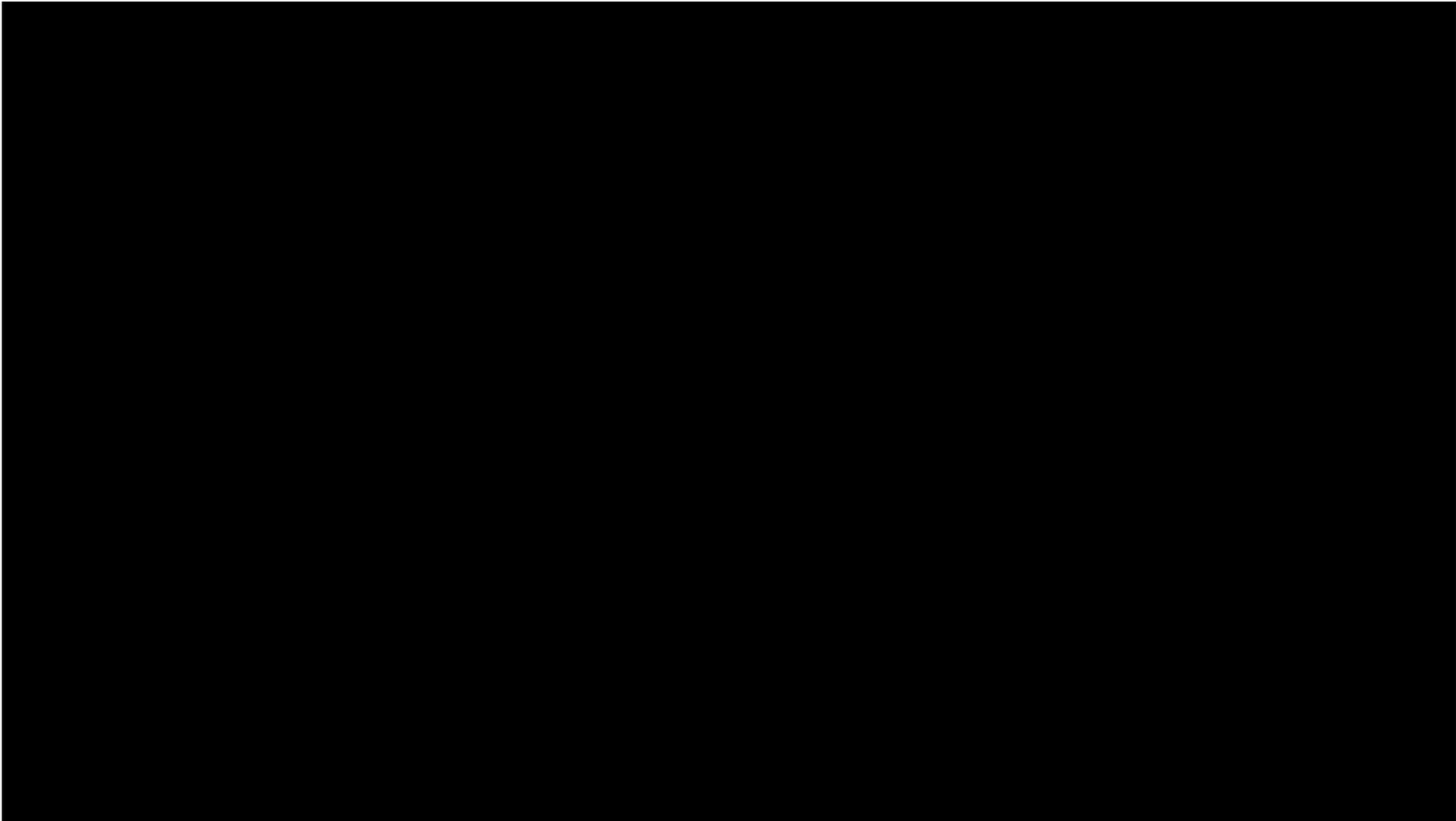


Network Operations

The most critical recovery asset

- Thousands of highly-trained and experienced technicians
- Proven ability to respond
- Clear direction and priorities
- Test equipment and tools
- Credentials and company vehicles
- Emergency response training







Talk To Us

- **We have the same goal – to enhance communication**
- **Before an Emergency:**
 - Understand our capabilities, your capabilities, concerns, and needs
 - Set expectations & identify solutions
 - Identify contact people
- **During an Emergency:**
 - Establish contacts, back-ups, and call times
 - Maintain situational awareness – information sharing
 - Identify priorities, set expectations



VCRT: Verizon Wireless Crisis Response Team

- Program supports first responders, government agencies, and non-profit organizations during emergencies
- **VCRT offers:**
 - Nationwide hotline answered live 24x7
 - Loaner phones & data devices
 - Assist with emergency wireless coverage
 - COWs & COLTs
 - Repeaters
 - Emergency Communication Centers
 - Charging stations
 - Phone calls – Internet access
- **Example Deployments:**
 - 2014 Arkansas and Mississippi Tornadoes – charging stations, loaner phones and data devices
 - 2013 Moore, OK Tornado – community communication trailer, command vehicle, charging stations
 - 2012 Hurricane Sandy – mobile offices, command vehicle, 2,000 data & phone devices deployed





Services that Support Emergency Needs

Wireless Priority Service (WPS)

- priority calling capability
- www.dhs.gov/wireless-priority-service-wps

Wireless Emergency Alerts (WEA)

- emergency alerts to mobile devices based on location
- www.fema.gov/wireless-emergency-alerts

Enhanced 911 (E911)

- helps dispatcher identify caller location

Law Enforcement Response Team (LERT)

- assists law enforcement with legally authorized CALEA requests
- vzwlert@verizonwireless.com



Wireless Solutions

- **Wireless Solutions Enhance Disaster Recovery**
 - **Contact Information:** Key contacts stored on device and cloud
 - **Broadband Access:** Work remotely with Aircard, Jetpack, etc.
 - **News & Information:** Access to Internet and news media
 - **Wireless Router:** Keep computers working if data circuit severed
 - **Network Extender:** Enhance wireless signal using wireline Internet



JETPACK



WIRELESS ROUTER



NETWORK EXTENDER



Working Together

GOVERNMENT

- **DHS:** National Coordination Center (NCC) contact
- **FEMA:** Private Sector seat & small business mentorship
- **White House:** Briefing on private sector preparedness
- **Exercises:** Federal, State, and Local
- **State and County:** EOCs & BEOCs

INDUSTRY

- All Hazards Consortium
- NY / NJ Regional Catastrophic Planning Team
- Support regional public / private partnerships

CUSTOMER

- Electric Utilities
- Banking Sector
- Transportation, other critical infrastructure



Public Safety Outreach

Verizon Wireless displays its commitment to the public safety community across the United States through our efforts to:

- Enhance relationships with federal, state and local public safety/law enforcement communities
- Leverage the relationships of our security personnel across the country, many of whom are former local, state or federal law enforcement officers
 - Seek opportunities to increase awareness of Verizon Wireless emergency response capabilities
 - BC/DR Outreach program focus on supporting government agencies as well as enterprise customers with disaster preparedness and disaster recovery response capabilities





Public Safety Support Program

- Long standing strategic relationships with public safety agencies
- Fallen Officer Memorial Fund with FBI National Academy
- Recipients of support include:
 - FBI National Academy Associates (FBINAA)
 - National Law Enforcement Officers Memorial
 - State Chiefs of Police Associations
 - HopeLine - Domestic Violence Prevention





Disaster Tested, Disaster Proven Tornados

TORNADO TESTIMONIAL

“all this communication helps us do things faster”

“having the tools you really need and what a difference it really makes”

Rhett Burnett

Under Sheriff, Cleveland County



Vilonia, AR - 2014



Moore, OK - 2013





Disaster Tested, Disaster Proven Hurricanes

**Hurricane Sandy
Rockaway, NY**



**Hurricane Sandy
Long Beach, NY**





Disaster Tested, Disaster Proven Hurricanes

**Hurricane Sandy
Ortley Beach, NJ**



**Hurricane Sandy
Hazlet, NJ**



Disaster Tested, Disaster Proven Flooding



Fargo Floods



Nashville Floods



Tropical Storm Lee



Disaster Tested, Disaster Proven Wildfires

WILDFIRE TESTIMONIAL

"Having the Verizon Wireless COW is amazing. It gives us a reach and a network we can tie into. Being able to come into an area where there is no cell coverage and within a short time, establish that is critical."

Public Official of Georgia Forest Commission



AZ Wallow Fire



**Outreach Command Center - CA Station Fire:
Free phone calls, charging, and Internet access**

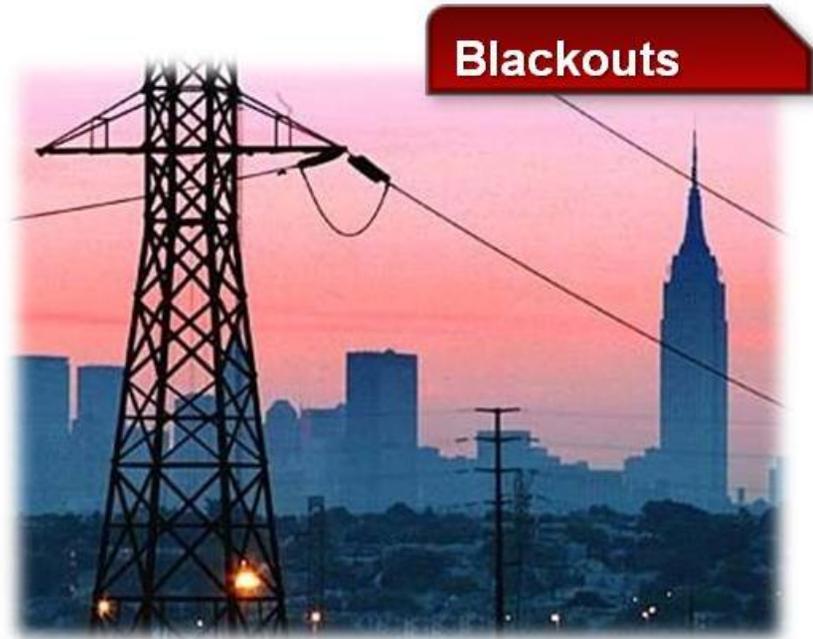




Disaster Tested, Disaster Proven Other Events



**San Bruno, CA
Natural Gas Line Explosion**



Gulf Oil Spill



Proactive Support

Provide support to events such as:

- Presidential Inaugurations
- Sporting Events (Super Bowl)
- Republican/Democratic Conventions
- G8 Summits
- NATO Summit



Proactive Steps

- ✓ Increased capacity of wireless network
- ✓ Coordinated efforts with local, state and federal agencies prior to event
- ✓ Briefed employee teams to ensure awareness and preparation
- ✓ Deployed network assets such as COWS, COLTS, Repeaters



Summary

- **Verizon Wireless and our resources are focused on consistently providing high-quality wireless services to our customers**
- **We invest considerable time and money to prepare for, and test our ability to respond to, emergency situations – not only those that affect us, but also those that affect our customers**
- **Our response capabilities and our teams have been tested and proven under many difficult, disastrous circumstances**

It's The Network



Summary

Thank You

Todd T. Biebel BS., MAS.
Manager of Business Continuity &
Disaster Recovery
Todd.Biebel@verizonwireless.com
908-285-4187



www.verizonwireless.com/emergencypreparedness