



ATIS STANDARD

ATIS-0100019

ATIS Standard on -

NRSC HURRICANE CHECKLIST



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The ATIS Network Reliability Steering Committee (NRSC)¹ was formed at the request of the first Network Reliability Council (NRC-1) to monitor network reliability. The NRSC strives to improve network reliability by providing timely consensus-based technical and operational expert guidance to all segments of the public communications industry.

As a trusted expert, the NRSC addresses network reliability improvement opportunities in an open, noncompetitive environment. The NRSC advises the communications industry through developing and issuing standards, technical requirements, technical reports, bulletins, best practices, and annual reports.

This document makes general recommendations regarding possible steps that should be considered by telecommunications companies in preparation for a hurricane. These general guidelines do not provide an exhaustive list of activities that should be taken in preparation for a hurricane. In addition, each telecommunications company should evaluate the applicability of any particular checklist activity to that company's unique network and operational environment. If there are activities your company performs that are not on this hurricane checklist, and you feel they would be beneficial to others if they were added, feel free to provide us with any feedback concerning additions, changes, etc. This feedback can be emailed to Jackie Voss at jvoss@atis.org with a reference to the NRSC Hurricane Checklist.

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ATIS-0100019 NRSC Hurricane Checklist

Is an ATIS Standard developed by the ATIS **NRSC**

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¹ This NRSC Subcommittee operates with the understanding that its guidance is distinct from other instruments; i.e. Best Practices are not standards nor regulations. Mandated implementation of the Best Practices is inconsistent with their intent. Rather, Best Practices are developed with the understanding that decisions regarding their applicability can only be made by individuals with sufficient competence and knowledge of relevant factors, including specific network implementations, technology, operational models and business considerations.



NRSC HURRICANE CHECKLIST

Prepared by the Alliance for Telecommunications Industry Solutions'
Network Reliability Steering Committee (NRSC)



The Alliance for Telecommunication Industry Solutions (ATIS) is a technical planning and standards development organization that is committed to rapidly developing and promoting technical and operations standards for the communications and related information technologies industry worldwide using a pragmatic, flexible and open approach. Participants from more than 350 communications companies are active in ATIS' industry committees and its Incubator Solutions Programs.

The ATIS Network Reliability Steering Committee (NRSC) was formed at the request of the first Network Reliability Council (NRC-1) to monitor network reliability. NRSC is a consensus-based industry committee that analyzes the communications industry's reporting of network outages, makes recommendations aimed at improving network reliability, distributes the results of its findings to industry, and, where applicable, refers matters to appropriate industry forums for further resolution. The NRSC also reviews regulatory developments affecting network reliability and submits consensus-developed comments on matters of common interest to NRSC members.

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HURRICANE CHECKLIST ACTIVITY	TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
STORM FACTS								
Monitoring Hurricane:	-							
NOAA website (http://www.nhc.noaa.gov/)	5d	x	x					
Major news media	5d	x	x					
Government contacts	5d	x	x					
Local contacts (internal and external to company)	5d	x	x					
Possible Damage:	-							
Gain an understanding of the anticipated event and its likely impacts to the network and resources.	3d	x	x					
Consider impacts from flooding, power outages, limited access, employee evacuations, etc.	3d	x	x					
Identify facilities, personnel, and other resources within the hurricane's potential impact areas.	3d	x	x					
Create Geographical Information System (GIS) maps overlaying hurricane's projected path over company territory.	3d	x	x					
Contact Human Resource (HR) data specialist for a report of potentially impacted areas.	3d	x	x					
Organization:	-							
Assign an emergency response manager with the lead role in gathering, consolidating and disseminating event information.	5d		x					
Create a specific hurricane event folder and log.	5d		x					
Post (and update) GIS maps, real estate spreadsheets, and HR report on an intranet website / bulletin board.	5d		x					
Determine if the impact area is likely to change over the course of the event.	3d		x					
If the hurricane is downgraded to a tropical storm or the path changes, continue to monitor until the threat is gone.	3d		x					
CONTACT LISTS								
Internal Contacts:	-							
Update the emergency organization/function charts and contact lists.	5d	x	x					
Provide emergency contact lists to all area managers.	3d	x	x	x				
Publish alternate Central Office (CO) access numbers.	3d						x	
Update contact lists for internal suppliers.	3d	x	x	x	x	x	x	x
Establish names/numbers for after hours coverage.	1d	x	x	x	x	x	x	x
CO techs should have their local Emergency Operations Center (EOC) contact numbers and a list of techs covering other offices.	1d		x				x	
External Contacts:	-							
Update contact lists, open lines of communication and place on alert as needed:	3d	x	x	x	x	x	x	x
Local, State, and Federal Emergency Management Agencies (EMA's)	3d	x	x					
National Coordination Center (NCC)	3d		x					
External suppliers	3d		x	x	x	x	x	x
Media - public affairs (communicate through Emergency Control Center (ECC))	3d	x	x					
Police, Fire, Hospitals, Emergency Medical System (EMS)	3d		x					
Public Service Answering Points (PSAPs)	3d		x					
Gas, water, and electric utilities	3d		x					
Fuel supplier, electricians, generator/electrical switch gear/battery and transportation, HVAC	3d		x		x	x	x	x
Red Cross	3d		x					
Contractors (tree trimming work, building restoration contractors, cleanup, etc.)	3d		x		x	x	x	x
Government EOC contacts	3d	x	x					
Interconnected communication providers	3d	x	x					
Local, state, and federal regulatory officials	3d	x	x					
EMERGENCY SITES AND LODGING								
Emergency Control Sites:	-							
Reserve and activate the primary or back-up EOC outside of the storm's path for tactical operations.	3d	x	x					
Determine if alternate logistics delivery sites are needed.	2d		x					
Logistics planning for EOC building occupants during storm duty.	2d		x					
Place request for food, beverages, office supplies, etc. for the EOC.	1d		x					
Temporary Lodging / Shelter:	-							
Reserve lodging for critical managers prior to storm.	2d		x					
Pre-plan for temporary housing and work locations for critical work centers in the affected area.	2d		x					
Consider alternate locations or work from home strategies.	2d		x	x				
Pre-select potential sites for tent cities (consider size, parking, etc.).	2d		x					
Designate "last resort" CO buildings as shelters.	2d		x		x		x	

HURRICANE CHECKLIST ACTIVITY		TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
ADMINISTRATION, COMMUNICATIONS, AND MANPOWER									
Communications with Employees:									
	-								
Practice effective communications.	5d	x	x	x	x	x	x	x	x
What is the problem we are trying to solve?	5d	x	x	x	x	x	x	x	x
Why is this important (priority)?	5d	x	x	x	x	x	x	x	x
What is the time frame we need for resolution?	5d	x	x	x	x	x	x	x	x
Set expectations and provide specific guidance.	5d	x	x	x	x	x	x	x	x
Send storm watch / warning alert to first responders and communication to all other employees.	3d	x	x	x	x	x	x	x	x
Contact impacted field managers.	3d	x	x	x	x	x	x	x	x
Advise to monitor weather conditions.	3d	x	x	x	x	x	x	x	x
Advise employees to prepare family and home prior to emergency.	3d	x	x	x	x	x	x	x	x
Coordinate the release of employees to handle their personal affairs.	3d	x	x	x	x	x	x	x	x
Give critical employees instructions on the return to the job.	3d	x	x	x	x	x	x	x	x
Cover employees on place of reporting procedures.	3d		x	x	x	x	x	x	x
Designate "after storm" assignments for employees and managers to include primary and alternate reporting locations.	3d			x	x	x	x	x	x
Discuss potential alternatives, such as working from alternate locations to continue operations.	3d			x	x	x	x	x	x
Establish communication channels and communicate to all personnel.	3d	x	x	x	x	x	x	x	x
Check the phone number for employees to call and say they're okay.	3d	x	x						
Establish and publish conference bridge numbers.	2d		x						
Determine when to call network monitoring centers.	2d		x	x			x		
Set up a local number for employees to call for local information.	2d		x						
Expand the utilization of liaisons from other internal organizations by temporarily placing them in the EOC.	1d		x	x					
Communicate frequently...hourly check-in with manager.	12h		x	x	x	x	x	x	x
Communications Methods:									
	-								
Prepare for total loss of cell phones and landline network.	5d	x	x	x	x	x	x	x	x
Evaluate the use of radios, next generation satellite phones, text pagers, long distance Foreign Exchange (FX) lines, etc.	5d		x						
Equip more employees with cell phones, "blackberries", or other similar device if necessary.	5d	x	x	x	x	x	x	x	x
Evaluate the use of IP-based communications.	5d		x						
Inventory satellite phones, hand and 2-Way Radios (UHF & VHF), cell phones, and pagers by type and location.	5d		x						
Have spare batteries and chargers (AC and 12-volt) on hand for these devices.	5d	x	x	x	x	x	x	x	x
Make sure cell phones are available from an alternate service provider for network managers trying to restore service.	5d						x		
Have an emergency liaison with the wireless providers advise which cell sites are accessible and work if provided a radio link.	5d		x						
Ensure the emergency communication tools are tested and ready.	3d		x						
Ensure all alternate communication devices are shipped out (as required/requested) before shipping delays may occur.	3d		x						
Test Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS).	3d	x	x	x					
Test Shared Resources (SHARES) High Frequency Radio Program and emergency voice communications network.	3d	x	x						
Charge all cell phones and similar devices.	1d	x	x	x	x	x	x	x	x
Public Coordination (Sales / Marketing):									
	-								
Prepare for an emergency supply of customer equipment (phones, handsets, data devices, etc.)	5d	x	x						
Plan post storm activities with customers and establish voice mail services.	3d	x	x						
Prepare for a media campaign, goodwill campaign, etc.	3d	x	x						
Prepare to keep our customers informed on safety, restoration, etc. via radio, television, internet, etc.	3d	x	x						
Ensure sales organizations notify key customers in the potentially impacted areas concerning our preparations.	2d				x				
Conference Bridges:									
	-								
Establish, post and update all conference bridge numbers used for hurricane activity.	3d		x						
Communicate critical items via daily conference bridge calls...backed up by email.	3d	x							
Assign representatives from all disciplines to monitor and support the various conference bridges.	3d	x	x	x					
Communicate status call timelines and participants to field managers and reinforce standard agenda.	12h	x	x	x					
Conduct conference calls with key management to discuss potential impact sites.	12h	x	x	x					
EOC establishes an open bridge for internal status (24x7).	8h		x						
Reporting and Notification:									
	-								
Prepare required preparation reports (for Region/National).	3d	x	x						
Review and update the field reporting requirements and procedures for information to and from the EOC.	3d	x	x	x	x	x	x	x	x
Create a folder on a shared drive to track status reports.	12h		x						
Coordination:									
	-								
Inventory priority communications programs:	5d		x						
Government Emergency Telecommunications Service (GETS)	5d		x						
Wireless Priority Service (WPS)	5d		x						
Telecommunications Service Priority (TSP)	5d		x						
Partner with security, federal marshals, National Guard, and law enforcement for ingress/egress and access requirements.	5d	x	x						
Obtain and review Department of Transportation (DOT) rules and waivers, and a copy of the state declaration.	5d		x						
Notify unions of emergency status.	5d	x	x						
Activate emergency core teams (Procurement, Real Estate, Safety and Environmental Management).	3d		x						
Review all the state traffic and evacuation details.	3d		x						
Establish a clearing house for decisions impacting multiple groups as defined by the business continuity plan.	3d		x						
Consumer repair network relocation	3d		x						
Corporate network	3d		x						
Switch replacement philosophy	3d		x						
Review abnormal event procedures with all management.	3d	x	x	x	x	x	x	x	x
Provide field managers with the strategic list of locations in the potentially affected area (switch, POP, regenerator, MSC, MSO).	3d		x						

HURRICANE CHECKLIST ACTIVITY	TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
Provide field managers with the list of potentially impacted network platforms.	3d	x	x					
Ensure technical support preparations, checklists, and pre-planning are on schedule.	3d	x	x	x	x	x	x	x
Remind field managers that requests for higher-level technical support must go through the on-call liaison officer.	3d	x	x					
Develop a re-entry strategy for the area.	3d	x						
Review staffing plans to ensure appropriate staffing levels – shifts covered, alternate reporting locations, etc.	3d	x	x	x	x	x	x	x
Determine the teams to staff the situation room 24x7 for the duration of the event.	2d	x	x					
Coordinate with your EOC to work with your ECC for emergency strike teams deployment:	2d	x	x					
Travel	2d	x	x					
Cell	2d	x	x					
Generator	2d	x	x					
Plant Protection	2d	x	x					
Central Office	2d	x	x					
Management Augmentation	2d	x	x					
E911	2d	x	x					
Safety	2d	x	x					
Regional field operations managers	2d	x	x					
RF Engineering	2d	x	x					
Transport/Facilities	2d	x	x					
Local EOC Team members notified and ready.	2d	x						
Develop checklists for positions of Coordinator, Manpower, General Administration, HR, Fleet, and Lodging.	2d	x						
Notify sales organizations of situation and preparations.	2d	x	x					
Advise business unit of event assessment and potential actions if impacted.	2d	x	x					
Engage representative to the ECC to synchronize response activities with Governmental EOC contacts.	2d	x	x					
Gather information on evacuation routes, road closures and potential office closures.	2d	x						
The technician picked to man each CO must be power proficient.	2d						x	
Establish damage survey preparedness teams and assign areas.	1d	x	x					
If needed, divide areas into sub-turfs and using a "full-scope" approach.	1d	x	x					
Verify readiness to execute power down procedures.	1d	x					x	
Stage additional resources to meet the capacity or service estimates as appropriate.	1d	x	x	x	x	x	x	x
Notify network control centers to be on alert.	12h	x	x		x			
Establish priority activities for the event.	12h	x	x	x				
Establish a mandatory evacuation time.	12h	x						
Loaned Personnel:	-							
Solicit early help from areas with recent experience. Their advice and insight can help start things out on the right track.	5d	x						
Check operability of the database for external and internal personnel loans.	5d	x						
Require loaned techs to receive tetanus shots (or other immunizations) at home location prior to travel.	3d	x						
Review the plan for equipping borrowed installation and maintenance technicians with tools, equipment, and identification.	3d	x						
Accountability and Time Reporting:	-							
Validate the process for employee accountability.	3d	x	x					
Review communications process and advise employees of operations status and how to obtain ongoing instructions.	3d	x	x	x	x	x	x	x
Everyone covered on "abnormal pay" and "refusal to work" policies.	3d	x	x	x	x	x	x	x
Costs:	-							
Temporarily increase limits on company purchase cards (upgrades/cash advances) if needed.	3d		x					
Credit cards and ATMs may be unusable due to power/communication issues.	3d		x					
Obtain storm expense accounting codes.	2d	x						
SAFETY, SECURITY, AND TRAINING								
System Access and Re-entry Credentials:	-							
All center groups should review their systems access and ensure region-wide capability.	5d	x	x	x	x	x	x	x
Validate the master file for all system access/software issues for each center work group / work function.	5d	x						
Review building access plans for all employees, including those loaned-in.	5d	x	x	x	x	x	x	x
Develop a list of critical personnel who would need access to restricted areas (include name, DOB, and SSN).	3d	x	x					
Review state's Standard Operating Procedure concerning re-entry into the impacted area:	3d	x						
A valid State Drivers License	3d	x						
A valid company-issued photo ID	3d	x						
Marked company vehicles (with standardized markings)	3d	x						
Letter of Access (LOA) for contractors (with verified phone number) stating that bearer and vehicle is authorized	3d	x						
Notify the necessary vendors, contractors, and support organizations of requirements for gaining access to an impacted area.	3d	x						
Determine if there are special access control and identification measures being put in place by law enforcement.	1d	x						
Security:	-							
Coordinate with corporate security for the protection of assets and employees.	3d	x						
Work with corporate security to determine if additional security measures are warranted for key facilities and assets.	3d	x						
Safety:	-							
Verify safety coordinator list is current prior to the storm.	5d	x						
Plan for employees to evacuate families and themselves if possible.	3d	x	x	x	x	x	x	x
For employees who do not evacuate, develop a list of names and planned locations.	2d	x	x	x	x	x	x	x
Avoid dispatches/call-outs during hazardous storm conditions.	1d	x	x	x	x	x	x	x
Advise employees to consider predicted flood areas when choosing a location to ride out the storm.	1d	x	x	x	x	x	x	x
Training:	-							
Conduct refresher training and provide instructions on pulling trailers (with generators, etc.).	5d	x						
Prepare for the training and local orientation of loaned employees as early as possible.	5d	x						
Conduct refresher training on identifying power poles and telephone poles in the field.	5d	x						

HURRICANE CHECKLIST ACTIVITY		TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
INVENTORY									
Planning:		-							
Designate a coordinator to handle ordering all supplies and to expedite material shipments.		3d	x	x					
Request and stage additional supplies prior to landfall if possible. The use of pods at remote locations can save time.		3d	x						
Secure agreement from vendors that they will agree to ship products immediately upon request after the storm.		3d	x	x					
Maintain records of materials ordered, received, and transferred.		3d	x	x	x	x	x	x	x
Availability of emergency supplies:		-							
Flashlights and spare batteries		3d	x		x	x	x	x	x
Rain gear		3d	x		x	x	x	x	x
Potable drinking water and Meals Ready to Eat (MRE) (staged in critical locations to hold personnel over until food arrives)		3d	x		x	x	x	x	x
Cots, blankets, etc.		3d	x		x		x		
Sufficient tools		3d	x		x	x	x	x	x
First aid supplies, neutralizing agents, eye wash kits, spill kits, etc.		3d	x		x	x	x	x	x
Toilet paper, portable toilets, etc.		3d	x		x	x	x	x	x
Other special requirements (helicopters, etc.)		3d	x						
Availability of work supplies:		-							
Mobile office trailers equipped and ready to deploy		3d				x	x	x	x
Manhole pumps		3d							x
Blowers		3d							x
Chain saws		3d							x
Portable generators		3d				x	x	x	x
Wireless resources (COWs, SOWs, satellites, etc.)		3d					x		x
Office supplies (paper, pens, etc.)		3d	x	x	x	x	x	x	x
Stakes		3d							x
Inside wiring		3d				x		x	
Outside Network Interfaces		3d					x		x
Insulating blankets, rubber gloves, aprons, ear plugs, safety glasses		3d				x	x	x	x
Poles (establish source of supply)		3d							x
Cable		3d							x
Select one person to handle the disbursement of all cable.		3d							x
Place orders for bulk cable early (25 pair, 50 pair, etc.).		3d							x
Terminals, enclosures		3d						x	x
Batteries		3d				x		x	x
Drop wire, strand		3d						x	x
Identify need for computer equipment (for field) and pre-identify available (spare) resources through Information Technology (IT).		3d				x	x	x	x
Construction material		3d				x	x	x	x
Coin boxes		3d							x
PHYSICAL ASSETS									
Vehicle Planning:		-							
Have a strategy for vehicle relocation and keep vehicles out of possible flood areas.		3d				x	x	x	x
Maintain a record of all vehicles and locations.		3d				x	x	x	x
Review locations in area to refuel company vehicles after storm.		3d				x	x	x	x
Top off fuel in all company vehicles.		1d				x	x	x	x
Equipment:		-							
Perform computer backups.		3d	x	x	x	x	x	x	x
Move backup software to high ground, maintain detailed list of storage points.		3d	x	x	x	x	x	x	x
Ensure all test sets function properly and provide backup batteries.		3d				x	x	x	x
Verify all power connections and equipment are out of basements and low-lying first floor areas subject to potential flooding.		3d				x	x	x	x
Update the list and location of deployable equipment and verify status/operability.		3d							x
COWs, SOWs, etc.		3d							x
Towers (microwave, earth stations, etc.)		3d							x
Land Mobile Radio (LMR) base stations		3d							x
Power equipment		3d							x
SLC trailers		3d							x
Secure and protect computer equipment, documents, electronics, capital tools and test equipment.		2d	x	x	x	x	x	x	x
Garbage bag wrap PC's, backed-up data files, etc.		2d				x	x	x	x
Vertically evacuate PC's, printers, and telephone sets to inner rooms and cover with tarps (above 1st floor).		2d				x	x	x	x
Protect or move PIC's.		2d				x	x	x	x

HURRICANE CHECKLIST ACTIVITY		TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
POWER AND FUEL									
Communication with Local Fuel Vendors:									
	-								
Review the plans for acquiring fuel.	3d	x							
Compile a list of external fuel supply locations or sources.	3d	x							
Pre-position fuel tankers so that fuel arrives sooner.	1d	x							
Communication and Coordination with Power Companies:									
	-								
Provide a utilities coordinator to interface with the power company per agreement.	3d	x							
Review how your CO/building gets power (substation, primary and alternate feeders, etc.).	3d	x			x		x		
Find out where they plan to stage techs and equipment.	2d	x							
Engine/Genset (portable and permanent):									
	-								
Test to ensure generators (portable and permanent) and transfer switches are functioning properly.	3d				x		x	x	
Check chargers, fuel, oil/air filters, oil, antifreeze, belt, fuel pump, water pump, etc.	3d				x		x	x	
Establish a generator refueling schedule for each location.	3d				x		x	x	
Inventory spare parts (fuel filters, belts, oil & filters, antifreeze, hose clamps, jumper cables, gas cans, etc.).	3d				x		x	x	
Review the start & transfer procedures (step-by-step).	3d				x		x	x	
Start engine & transfer load to reduce power hits.	1h				x		x		
Fuel Tank:									
	-								
Ensure leak detection is functioning properly.	3d				x		x	x	
Verify that water & sediment are at acceptable levels.	3d				x		x	x	
Check spill kits and booms.	3d				x		x	x	
Check the day tank operation.	3d				x		x	x	
Arrange for propane fuel for portable power units and ensure bottles are full.	3d				x		x	x	
Verify that all portable fuel cylinders are stored and secured in appropriate locations (propane, etc.).	2d						x	x	
Ensure access ports are closed and covers are in place.	1d				x		x	x	
Top off all fuel tanks (do not overfill).	1d				x		x	x	
Batteries:									
	-								
Check condition, electrolyte level, age, and charge (NOTE: lack of start battery maintenance causes most engine failures)	3d				x		x	x	
Rectifiers:									
	-								
Check to make sure rectifiers are working properly.	3d				x		x	x	
Inventory spare parts (circuit boards, fuses, etc.).	3d				x		x	x	
Staging and Deployment:									
	-								
Review the existing plan for distributing generators and portable pumps.	3d	x			x		x	x	
Plan to stage generators as close to the affected area as possible, out of flood areas and out of harms way.	3d	x							
Verify and update the local generator (and vehicles with generators) list/database.	3d	x						x	
Generator deployment teams should be identified, informed, and assigned areas.	3d	x						x	
Place local generator dispatch center on alert.	3d	x							
Verify that an experienced power technician is available to accompany the driver.	2d							x	
Ensure that maps, keys, and tools are available for those pulling generators.	2d	x						x	
Determine generator requirements.	2d	x			x	x	x	x	
Remote/cell sites should be prioritized for initial generator deployment.	2d	x						x	
Determine the number of critical sites without generators in the "high impact" area of the storm for deployment.	1d	x			x	x	x	x	
NETWORK SERVICE									
Work Load:									
	-								
Review jobs in progress, and achieve a safe/secure stopping point.	2d	x	x	x	x	x	x	x	x
Prepare for a service order increase due to storm damage.	2d	x	x	x	x	x	x	x	x
Impose a work moratorium on all nonessential work related to Network Operations.	12h	x	x	x	x	x	x	x	x
Preventive Measures:									
	-								
Verify that all multiplexers, rings, and protect facilities are fully operational.	5d						x	x	x
Weatherize or weatherproof Crossboxes and Remotes/Cells as needed.	3d								x
Secure assets in low lying areas and make sure all equipment covers are secure.	3d								x
Review/update vulnerability assessments of critical facilities or networks.	3d		x	x			x	x	x
Begin proactive patrolling of interoffice facility fibers and other critical fiber/cable routes.	2d								x
Begin proactive grid sweeps by engineers.	2d								x
Prepare roaming wireless restoration teams to help in reducing wireless troubles.	2d								x
Test traffic redirection for lines/services in the affected areas.	2d						x	x	
Place network monitoring centers on heightened alert for affected areas.	2d		x				x		
Review back-up plans for loss of key facilities (network re-routes, etc.).	2d		x	x			x	x	
Move loose outside materials inside or secure the materials left outside (with sandbags, etc.).	2d					x	x	x	x
Transport the equipment outside of the impact area if possible.	2d					x	x	x	x
Prepare for possible obstacles (inaccessible locations, road closures, evacuations, decontamination requirements, etc.).	2d	x	x	x	x	x	x	x	x
Priority Areas:									
	-								
Prioritize recovery areas (critical outages, largest or highest populated areas, etc.)	2d		x				x	x	x
Establish "Expedite and Escalation Center" to prioritize installation and restoration of critical services and to ensure parity.	2d		x				x	x	x
Prioritize Remote/Cell sites (for hospitals, fire, police, etc.) ensuring routines completed and sand-bag as required.	2d		x				x	x	x

HURRICANE CHECKLIST ACTIVITY		TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
CENTRAL OFFICE AND OTHER BUILDINGS									
Power Failures:		-							
Ensure DC lights, flashlights, and batteries are available and functioning properly.	3d					x	x	x	x
Review power-up and power-down procedures of CO equipment to better sustain battery life by operating in simplex mode.	3d							x	
Review power-up and power-down procedures of CO equipment in case a complete shutdown is needed due to flooding, etc.	3d							x	
Place power technicians in strategic locations.	1d							x	x
Begin using available remote access tools to monitor the status of the CO power and standby power plants.	6h							x	
Prepare to place the engine on manual if CO goes on generator...to avoid it from going back to commercial (saves start battery).	6h							x	
Winds and High Water:		-							
Identify buildings and facilities in flood plains and assess the need to evacuate.	3d		x						
Ensure sandbag requirements are met.	3d					x	x	x	x
Inspect sump pumps for operational readiness.	3d					x	x	x	x
Check for leaking or missing duct plugs in all Controlled Environment Vaults (CEVs)...double-check low lying areas.	3d							x	x
Pump manholes adjacent to CO's and inspect conduit plugs.	2d							x	x
Install storm shutters (or board up) and seal offices.	1d					x	x	x	x
Check cable vaults for trash or material that could cause the sump pump to fail or become ineffective.	1d					x		x	x
Perform a walk-thru of the parking lot (and roof, if applicable) for loose material, supplies, etc.	1d					x	x	x	x
Sandbag doors, loading docks, basement entrances, etc.	12h					x	x	x	x
Inspect all air intakes and exhaust, and sandbag low level intakes if required.	12h					x		x	
Check low lying areas to ensure flood closures are secure, and seal all temporary closures.	12h					x		x	x
Miscellaneous:		-							
Inspect heating, ventilation, and air conditioning (HVAC).	3d					x		x	
Inspect fire alarms and any monitoring systems.	3d					x		x	
Check the availability & security (wind/flood) of compressed gases.	3d					x	x	x	x
Verify nitrogen tanks are in place for buffering air dryers in CO's and/or pressurized cables.	3d					x	x	x	x
Ensure backup tapes have been made and are stored at an off site location (all elements capable of backing up).	1d							x	
LONG-TERM PREPARATIONS									
Maintain Year-Round:		-							
Maintain contacts and communications with the local power company...including escalation procedures.	n/a	x	x	x				x	
Understand their language and document how your CO/building gets power (substation, primary and alternate feeders, etc.).	n/a	x	x	x				x	
Keep up-to-date with all training:	n/a	x	x	x				x	
Required annual compliance coverage	n/a	x	x	x				x	
Pulling trailers (with generators, etc.)	n/a	x	x	x				x	
Safety training	n/a	x	x	x				x	
Identifying power poles and telephone poles in the field	n/a	x	x	x				x	
Cross-train as many people as possible in all aspects of the job. This helps in case of emergencies.	n/a	x	x	x				x	
Improve the skill sets, training, and equipping of power technicians.	n/a	x	x	x				x	
Establish/maintain necessary databases and files:	n/a	x	x	x				x	
Master file for all system access/software issues for each center work group (or work function).	n/a	x	x	x				x	
Database for external and internal personnel loans.	n/a	x	x	x				x	
List and location of deployable equipment and status/operability (SLC trailers, COWS, SOWS, etc.).	n/a	x	x	x				x	
Verify that data circuit designations are maintained in a database for speed of restoration for:	n/a	x	x	x				x	
State and local EOCs	n/a	x	x	x				x	
Fire and police departments	n/a	x	x	x				x	
Hospitals	n/a	x	x	x				x	
Airports	n/a	x	x	x				x	
Military bases	n/a	x	x	x				x	
Utility plants (power, water, sewage)	n/a	x	x	x				x	
Other connected communications companies	n/a	x	x	x				x	
Levee Districts, Corp of Engineers, and Port Authorities	n/a	x	x	x				x	
Name multiple safety coordinators prior to the storm. You can adjust later, but have these people trained and ready to go.	n/a	x	x	x				x	
Establish/maintain a phone number for employees to call and say they're okay during/after emergencies.	n/a	x	x	x				x	
Have a plan for tetanus shots (or other immunizations) for employees that may work hurricane areas in the future.	n/a	x	x	x				x	
Keep vehicles serviced and maintained.	n/a	x	x	x				x	
Maintain a supply of contractor badges, magnetic signs and other credentials.	n/a	x	x	x				x	
Have tools and equipment ready for loaned personnel during hurricane season.	n/a	x	x	x				x	
Ensure that all multiplexers, rings, and protect facilities are fully operational (test as necessary).	n/a	x	x	x				x	
Ensure the generator start & transfer procedures remain up-to-date (step-by-step).	n/a	x	x	x				x	
Test run engines/generators on a routine basis.	n/a	x	x	x				x	
Test fuel reserves for contamination at least once a year or after any event that could compromise the tank housing or pipes.	n/a	x	x	x				x	
Ensure that recorded announcements are specific and identify which carrier is responsible.	n/a	x	x	x				x	
Long-Term Plans / Prevention:		-							
Power connections and equipment should be located in areas that are not likely to flood (basements, etc.).	n/a				x	x	x	x	
Seek agreements with vendors with a willingness to exercise risk management and increase stock prior to hurricane season.	n/a				x			x	
Long range plans for all fiber cable should be to bury.	n/a				x			x	
Pursue development of a higher tensile strength aerial service wire.	n/a				x			x	
Negotiate a wider right-of-way to prevent trees from being the issue that it has been when aerial cable is the only choice.	n/a				x			x	
Trim trees within right-of-ways yearly...in partnership with local power company.	n/a				x			x	x
If possible, consider providing natural gas connections near DLC sites and convert small generators so that they can run from it.	n/a				x			x	
Design the outside network to better withstand flooding and severe weather, and make restoration easier.	n/a				x			x	

HURRICANE CHECKLIST ACTIVITY	TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
POST-STORM ACTIVITIES								
Employee Safety:	-							
Account for the well-being of all employees (utilizing automated systems if available).	n/a	x	x	x	x	x	x	x
Contacts:	-							
Publish and maintain a master list of temporary office telephone numbers for displaced workers immediately after the storm.	n/a		x					
Conference Bridges:	-							
Conduct executive update with necessary teams and ensure the following agenda items are covered:	n/a		x					
Event status	n/a		x					
Environmental status: Wireless and Wireline (switch, pop, earth station, regen)	n/a		x					
Cell site status and damage assessment	n/a		x					
Local coordination (utilities, electrical, authorities, state EOC)	n/a		x					
Technician coordination (lodging, food and services, employee family assistance process)	n/a		x					
Network element coordination (element assessment, technical and vendor support, backup and shutdown process)	n/a		x					
Generator and fuel status	n/a		x					
Other issues	n/a		x					
Action items	n/a		x					
Next call	n/a		x					
Ensure updates to the following information once executive update is concluded:	n/a		x					
Update event log.	n/a		x					
Executive v-mail blast through the ECC	n/a		x					
Update master assessment log.	n/a		x					
Post executive summary to Intranet site.	n/a		x					
Send executive summary e-mail to event distribution list.	n/a		x					
Update the event master assessment log.	n/a		x					
Costs:	-							
Set up accounting procedures for loss recovery.	n/a		x	x				
Secure funds for employee advances/cash.	n/a		x	x				
Remind employees to use correct special accounting codes.	n/a	x	x	x	x	x	x	x
Temporary Lodging / Shelter:	-							
Consider leasing a hotel so that a management teams could operate, and where employees could live temporarily.	n/a		x					
Consider temporary renovations to existing CO buildings as a means to avoid tents for temporary housing.	n/a		x				x	
House restoration strike teams in locations near the EOC to facilitate dispatch efforts.	n/a		x					
Extra Work Force:	-							
Get daily info on incoming/pending load (troubles and service orders) so that decisions can be made on force redeployment.	n/a		x	x	x	x	x	x
Assess post-storm force/vehicle/tool needs.	n/a		x	x	x	x	x	x
Note and escalate any requests for additional resources.	n/a	x	x	x	x	x	x	x
Determine the appropriate dispatch strategy.	n/a		x	x	x	x	x	x
Learn if personnel and/or the emergency response team will go to the impacted area and create a travel list.	n/a		x					
Request that the home location inventory all tools and send a record of the inventory with the borrowed employee and vehicle.	n/a		x	x				
Prepare a list of motor vehicles that arrive with the borrowed employees and send to fleet operations.	n/a		x	x				
Obtain emergency contact information for the borrowed employees.	n/a		x	x				
Ensure safety materials and tools for all borrowed employees upon arrival and departure.	n/a		x	x				
Set expectations (training/orientation sessions) with the borrowed forces whether internal or contractors.	n/a		x	x				
Distribute orientation package to borrowed forces (welcome, work groups, work hours, place of reporting, safety, etc.).	n/a		x	x				
Inventory computer resources for use by contract and loaned engineering forces.	n/a		x	x				
Obtain additional access keys as required for borrowed employees.	n/a		x	x				
Provide transportation arrangements for borrowed employees.	n/a		x	x				
More planning and project management should be allocated immediately to catastrophically damaged areas.	n/a		x	x				
Contact multiple equipment vendors for all outside plant network components (Crossboxes, RT's, etc.).	n/a		x					
Ensure power vendors and electrical contractors have enough resources on-site with adequate materials/supplies available.	n/a		x			x	x	
Safety:	-							
Determine which areas are safe for work.	n/a		x		x	x	x	x
Contact the power company and advise the field as areas become safe for sweep teams and techs to work.	n/a		x					
Deploy outside plant technicians as soon as possible...but not before the power company is out of the way.	n/a		x					x
Put safety teams in place as soon as possible to assist with the many issues related to the storm.	n/a		x					
Assign someone to deliver "after storm" safety training for technicians and management.	n/a		x					
Complete safety coverage of loaned employees before they are deployed into the field.	n/a		x					
Emergency Supply Availability:	-							
Deliver additional portable toilets to locations as needed.	n/a		x					
Arrange for additional house service supplies.	n/a		x					
Obtain portable refrigerators for medical supplies and food.	n/a		x					
Deliver food, water, and ice to locations as needed.	n/a		x					
Power and Fuel:	-							
Continue to monitor the status of power, fuel, and batteries throughout the lifecycle of the event and service as necessary.	n/a		x		x	x	x	x
Immediately after the storm, a local manager should make arrangements for a company generator to power a local gas station.	n/a		x					
Working with local officials the designated station will provide fuel to emergency and company vehicles until tankers arrive.	n/a		x					
Local officials will also have to agree to provide security for this location.	n/a		x					

HURRICANE CHECKLIST ACTIVITY	TIME FRAME	ECC (strategic)	EOC (tactical)	Sr. Mgt.	Bldg. / Office	Network Ops	Central Office	Outside
Damage Assessment and Service Restoration:	-							
Restore service based on established priority lists.	n/a	x				x	x	x
Account for all assets.	n/a	x	x	x	x	x	x	x
Partner with corporate real estate and services to allow decontamination and equipment recovery efforts to occur in parallel.	n/a	x						
Provide instructions and assignments for damage assessment teams.	n/a	x						
Coordinate survey team activities/areas cleared of power hazards.	n/a	x						
Activate the field sweep teams.	n/a	x				x		x
Deploy team for initial CO hazard/damage assessments.	n/a	x					x	
Inspect power plants and switch.	n/a					x	x	x
Dispatch established survey teams to do Digital Loop Electronics (DLE) site damage assessment.	n/a							x
Deploy cell site strike team to restore service immediately after the storm passes.	n/a	x						x
Monitor and report Interoffice Facility (IOF) status...reroute if possible	n/a					x		
Communicate the damage survey information to the designated office.	n/a	x	x	x	x	x	x	x
Maintain the damage repair progress reports.	n/a	x						
Contact city/county representatives immediately after the storm to identify any service problems.	n/a	x						
Keep our customers informed of our restoration effort via radio, television, internet, etc.	n/a	x	x					
Utilize automation (Interactive Voice Response, etc.) for ticket closeouts.	n/a	x			x	x	x	x
Instruct the cleanup and decontamination personnel that pressure washers cannot be used in the vaults.	n/a				x	x	x	x
An assessment checklist should be provided to the necessary vendors with all critical information, such as:	n/a	x				x	x	
Contact information	n/a	x				x	x	
Nature of disaster and equipment damaged	n/a	x				x	x	
Information on building, switching, transmission, power, software, cables, etc.	n/a	x				x	x	
Work with the other communications companies on getting their networks back up.	n/a	x				x		
Prepare for a service order increase if FEMA and other governmental agencies move in and residents find temporary housing.	n/a					x	x	x
Consider powering HVAC on generator or deploying mobile HVAC units in the event of a power outage.	n/a	x					x	
Adjust the provisioning and maintenance clocks if necessary.	n/a	x	x					