



***Enterprise Business Continuity/
Disaster Recovery Planning***

University IT Standards Committee

September 10, 2003



Historical Planning

- First Disaster Recovery Project 1987
- Next Disaster Recovery Project 1993
- Current Disaster Recovery Project started February 2001 and is ongoing
 - Development and testing of IT plans for 30 critical administrative business units and critical academic units.



DR Project Status

- ✓ **Interim Distributed Plan developed; Testing scheduled for Spring 2004.**
- ✓ **Interim Mainframe Plan developed and tested annually since 2001**
- ✓ **Construction of secondary data center (Support Services Center on Sullivan Drive)**
- ☐ **Academic IT Business Continuity Plans will be created and Administrative IT Business Continuity Plans will go through the 3rd revision.**



University-wide Planning

- In March 2002, Chancellor Marye Anne Fox created a University-wide Business Continuity and Disaster Recovery Planning Committee.
 - **Role:** To *expand* disaster recovery business continuity planning efforts beyond the current focus on administrative and academic information technology resources and services.



Mission Statement

- Provide leadership in coordinating, assessing, developing and communicating business continuity planning principles to campus departments and colleges
- Facilitate the development, testing, and maintenance of Business Continuity Plans



Strategy

- Conduct Business Impact Analysis and Risk Assessments
- Provide guidance in plan development and recommend recovery strategies .
- Develop and maintain standards and procedures for disaster recovery documentation.
- Maintain a centralized repository for campus business continuity plans.
- Establish disaster recovery testing methodologies.
- Develop a training/awareness program for Business Continuity.



Enterprise Planning

- Enables the university to quickly and effectively manage and resolve emergency situations
- Takes advantage of previous work and currently positioned resources and competencies
- Enables academic and administrative units to concentrate on what they know best and call on other resources for requirements outside their familiar business components

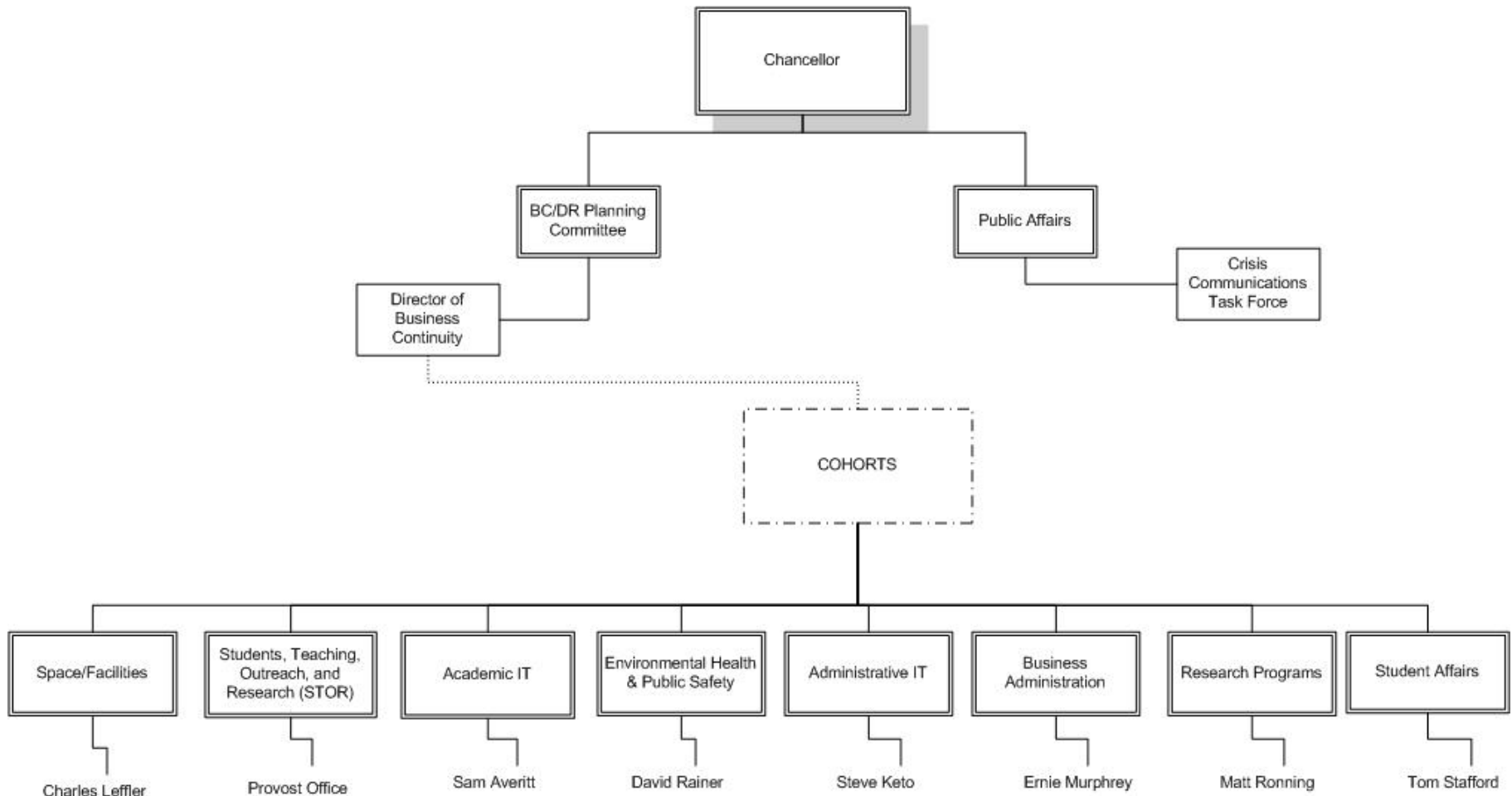


Business Continuity/DR Planning Committees

- Disaster Recovery Planning Oversight Committee
 - Chaired by Steve Keto and Sam Averitt
- University BC/DR Planning Committee
 - Chaired by David Rainer and Sam Averitt

NC State University

Business Continuity & Disaster Recovery





- **Business Continuity Plans must be created for functions that are “Mission Critical”**
 - Mission Critical functions = the University could not function or meet *core obligations* and *commitments* without them.
 - Considerations include potential impacts on the safety of resident and non-resident students, faculty, and staff; the preservation of property and facilities; academic and research activities; and financial operations.



Where do we go from here?

- Identification of Cohort Coordinators
- Conduct Risk Assessments
- Develop Business Continuity Plans for business units who do not have plans
- Annual update of IT BCPs for critical administrative business units
- Walkthrough Exercises to be scheduled for administrative business unit BCPs



Black Outs



Flooding



Inability to Access Facility



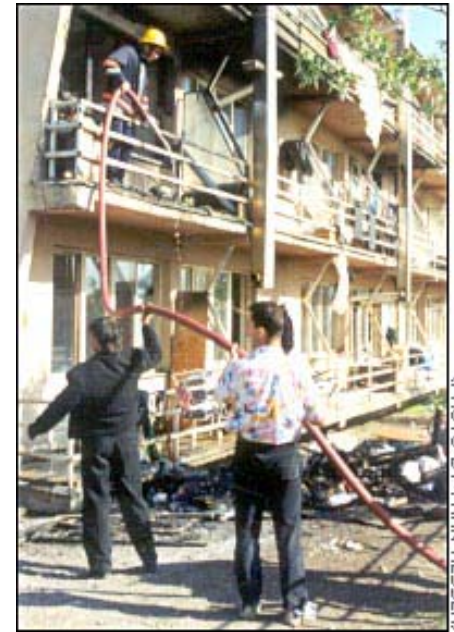
Security Breaches



Train Derailments



C a m p u s F i r e s





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newsobserver.com

Thursday, July 24, 2003 12:00AM EDT

Raleigh outage halts downtown, N.C. State dark

By SARAH LINDENFELD HALL AND J. ANDREW CURLISS, Staff Writers

RALEIGH -- A contractor's crane hit a main power line at a student housing project at N.C. State University, knocking out power for hundreds of businesses and offices downtown and on the university's main campus about mid-day Wednesday.

Progress Energy crews restored power 31 minutes later, by 1 p.m., for about 325 customers, including City Hall, the Wake County Courthouse and some large downtown businesses, said Julie Hans, a company spokeswoman.

The lights came back on at a mostly empty NCSU campus about 2 1/2 hours later, shortly after 3 p.m., said Tim Lucas, a university spokesman.

The crane operator, who was helping to build Wolf Village, an on-campus apartment complex near the corner of Western Boulevard and Gorman Street, wasn't injured, Lucas said.

Lucas was on campus when the power switched off.

"It just, boom, it went out," he said.

Emergency generators at university laboratories, Raleigh's 911 dispatch center and the Wake County jail, among other places, kicked on. With traffic lights out, city police rushed to guide vehicles at some intersections.

The western half of downtown seemed to stop when the power cut out.

Workers and visitors emptied out of dark buildings into a slight drizzle. They lined the sidewalks, huddled under awnings and overhangs, mostly chatting, as officials scrambled around.

Some people were trapped in elevators -- at the courthouse, for instance -- and rescuers worked to free them. Raleigh Fire Department Capt. Greg Wall said seven or eight people were stuck in three elevators at the courthouse.

"We opened them, and they were just standing there," he said. "And then, of course, the power turned right back on."

In one, four women had just left a court hearing and ended up stuck between the second and third floors.

"I'm not going to lie -- I was scared," said Owanetta S. Boston, 22. She said a voice came on a loudspeaker and said that people were trapped in other buildings downtown, too.

So the women sat down, they said, and ate pretzels and talked about "the birds and the bees."

Workers in the Wachovia Capitol Center downtown were forced to take a freight elevator to go to lunch.

"It's just the power," said Jessica Harrelson, a project coordinator for Smith Anderson who works on the 27th floor. "It's no big deal."



Station II Cafe & Grill employees -- from left, Iyad Aloumari, his mother, Widad Fouad; and his father, Nejat Aloumari -- sit at the window of their darkened Salisbury Street sandwich shop at 12:45 p.m. Wednesday.
Staff Photo by Harry Lynch



A Progress Energy crane moves away from power lines that it hit at Gorman Street near Western Boulevard.
Staff Photo by John L. White

July 24, 2003

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Power Outage – Crane

July 23, 2003 – From 12:30 – 2:55 p.m.

- **Impact**

- Property Damage (minor surges to electronic devices)
- Network downtime due to switches located in facilities without generator backup



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newsobserver.com

Wednesday, July 30, 2003 6:28AM EDT

Surprise storm fills roads, rain gauges

By THOMASI MCDONALD AND SAMIHA KHANNA, Staff Writers

RALEIGH -- A brief but ferocious rainstorm Tuesday afternoon flooded businesses and classrooms at N.C. State University, stalled motorists on swamped streets and caused scattered power outages throughout Wake County.

The storm hit the Triangle with a tsunami-like earnestness about 3 p.m. and dropped more than 3 inches of rain in little more than an hour. The sudden deluge prompted officials to issue a flash flood warning for Wake County, the National Weather Service at NCSU's Centennial Campus reported.

"I've never seen that much rain in so short of a time period. It overflowed the rain gauges," said weather service meteorologist Trisha Palmer.

Intense but unrelated storms were deadly in other parts of the state Tuesday. Three people were killed and a fourth suffered life-threatening injuries in Matthews. A man, a woman and a girl were killed when a tree fell on their car outside a Home Depot store, The Associated Press reported.

A second girl was airlifted to Carolinas Medical Center with life-threatening injuries, the Mecklenburg County emergency medical agency said.

In southern Wake County, a man working on the roof of a residence on Cotton Road was injured during the storm. The man, who may have fallen off the roof when lightning struck nearby, was transported by county emergency workers to WakeMed's trauma unit, said Jerry Brown, a supervisor with Wake County Emergency Services.

Information on his condition was unavailable Tuesday night.

Three minor house fires -- probably sparked by lightning -- were reported from 4 to 4:15 p.m., said Raleigh Fire Department Battalion Chief Rusty Styons.

The residences were in Southeast Raleigh on Solar Drive, in northwest Raleigh on Brisbane Circle and in east Raleigh on Windblown Lane, authorities reported.

The fire department also responded to dozens of fire alarms that went off because of the storm, said District 2 Fire Chief Jackie Weathersby.

Weather experts said the late-afternoon storm came out of nowhere.

"The storm developed west of Raleigh in Cary and just blew up," Palmer said. "It just hovered over Raleigh until it rained itself out."

The storm's most dramatic impact occurred in West and Southeast Raleigh, authorities reported.

At the storm's peak, 3,102 power outages were reported in Raleigh, Garner and Cary, a Progress Energy representative said. That included an outage at the McKimmon Center on the NCSU campus that left about 650 Wake educators at a training workshop without power for about an hour.

Low-lying areas of at least five NCSU parking lots held 2 feet of standing water, and about 20 cars were damaged, said NCSU police Sgt. Jon Barnwell.

Basement offices and classrooms of several academic buildings on the campus were flooded, but university workers expected the buildings to reopen today after overnight efforts to extract the water, Barnwell said.

"That's the heaviest downpour I've seen at one given time that's not related to a hurricane," said Barnwell, who has worked at NCSU for six years.

Raleigh police reported stalled cars at Oberlin and Clark streets, Western Boulevard and Pullen Road, and in the 2800 block of Avent Ferry Road.



Melissa Adams and her children Darrickus, 2, and Kanya, 10 months, hustle home through a downpour from a bus stop on Proctor Street in Raleigh. "The rain caught me off-guard, very off-guard," Adams said.

Staff Photo by Corey Lowenstein



Chinnapas Thomas rides his bicycle through water rushing over a section of Avent Ferry Road.

Staff Photos by Scott Sharpe



Cheng Wang balls about 6 inches of water from his car at the Kensington Park Apartments off Avent Ferry Road.

July 30, 2003



Flooding from Rain Storm *July 29, 2003*

- **Impact**
 - 44 locations flooded
 - No flood insurance
 - The Bureau of Mines (Physics) department flooded
 - Displaced staff for 7- 10 days
 - Avent Ferry Housing – 27-28 dorm rooms flooded
 - Carpeting/flooring damage
 - Displaced students for 1 week



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newsobserver.com

Thursday, August 14, 2003 7:35AM EDT

Worm sows trouble

By VICKI LEE PARKER AND MARK MINTON, Staff Writers

The Internet worm that is wreaking havoc on computers worldwide also is covering a lot of ground locally.

Several universities, banks, small businesses and individuals in the Triangle raced Wednesday to install anti-virus software to thwart further spread of the "Blaster" or "Lovsan" worm, which so far has turned out to be more of a pain in the neck than a real threat.

"Right now, it's really a nuisance," said Jeff Webster, security coordinator at N.C. State University, where several hundred computers were infected. "It is really not destructive to our files."

Officials at the University of North Carolina at Chapel Hill estimated 1,000 to 2,000 computers were infected, forcing the university to shut the network down for about eight hours.

Central Carolina Bank in Durham had about 30 branches affected by the worm, but customer account information was not jeopardized, said Eileen Sarro, corporate communications manager. She said that about two-thirds of CCB's 6,000 employees have computers at their desks, and that all units had to be updated with a software "patch" that fixes the worm.

The worm affected about 227,000 Windows-based computer systems across the nation before starting to show some signs of winding down Wednesday. The worm does not affect computers using Macintosh or Linux operating systems.

Blaster is a type of computer virus that spreads by copying itself to other drives, systems or networks. It doesn't require a program or file to latch onto to disseminate. The Blaster worm spreads by scanning the Internet looking for computers that have not yet installed a software update from Microsoft that patches the hole in its operating systems.

The worm is programmed to try to shut Microsoft's www.windowsupdate.com Web site, which is used to distribute security updates, beginning Saturday and continuing until the end of the year.

Among its victims were the Federal Reserve Bank of Atlanta, which had to shut its computer system down, and J.C. Penney Co, the second-largest U.S. department-store chain, whose system was hit Tuesday morning as it was reporting financial results.

Though widespread, the worm does not destroy files or damage computer systems. The main problem so far has been it can prevent users from accessing the Internet.

Home users are seeing the biggest difficulties. Marty Lindner, team leader for incident handling at the CERT coordination center at Carnegie Mellon University, told Bloomberg News. CERT is a federal program that looks for software vulnerabilities and how to protect computers.

CERT is getting more phone calls from home users than it ever has in the past, Lindner said. Many users find their computers keep restarting so they can't stay on long enough to find the information they need to remove the worm.

"Today [Wednesday] has been nothing but taking calls related to the virus," said Elmer Hill with the Chapel Hill-Cary franchise of Geeks-On-Call, a chain that services residential and small business computers. Hill handled three virus house calls Wednesday.

Although Microsoft and computer specialists sent out alerts last month warning Windows users about the worm, not everyone took notice. Even those who did weren't completely spared.

"When Microsoft announced this back in July, we started patching immediately," said Wachovia spokeswoman Sandy Vasseur. "In a group of 85,000 employees, we had a few hundred desktops infected."



Paul Pelletier checks a computer Wednesday that had been brought into his computer shop in Waterville, Maine, after being hit by the "Lovsan" worm, a type of virus that causes computers to restart.

AP Photo by Jim Evans

TO GET HELP

To learn more about virus protection, check these Web sites:

Symantec, a maker of virus protection software, www.symantec.com

McAfee Security, a maker of computer protection software, us.mcafee.com/default.asp

Bullguard antivirus information & news, www.bullguard.com/antivirus/news_130.aspx

Rav academic/government anti-virus solutions, www.ravantivirus.com

Acadea's Antivirus help page, www.acadea.com/AntivirusHelp.htm

Anti-Virus Center, www.mfseminars.com/av/av.htm

If you've been infected by the "Lovsan" or "Blaster" worm (and for more information on how to stop virus attacks), go to Microsoft's site (www.microsoft.com) for the appropriate patch, or software update.



What's on the way ?

- Working with the *new ACS* Information Security Office and ITD IT Security Division in incorporating Security in BCP
- Risk Assessment = 1 – 2 months
- Business Continuity Plan Development = 1 – 3 month
 - Coordinated effort between EH&S, ACS, and ITD



Contact Information

Katina Blue, *Director of Business Continuity*

1150 Varsity Drive - CB 8007

515-5201 (office)

515-6307 (fax)

795-1110 (mobile)

Katina_Blue@ncsu.edu

<http://www.ncsu.edu/ehs/BCP/bcp.htm>

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