

2012 North Carolina Hurricane Workshop

a collaboration of

NORTH CAROLINA Emergency Management

and

 East Carolina University.



The Third Annual NCEM-ECU Hurricane Workshop

May 23, 2012

Communication and Emergency Management



Workshop Summary

North Carolina Emergency Management in partnership with East Carolina University's Center for Natural Hazards Research and the Renaissance Computing Institute's Engagement Center at ECU held a Hurricane Workshop on May 23, 2012 at the Murphy Center in Greenville, NC. Over 150 emergency managers, meteorologists, public information officers, emergency responders and university researchers gathered to discuss the lessons learned from Hurricane Irene, improvements to weather forecasting, and discuss challenges faced by emergency and communications professionals. Highlights of the workshop:

Social Media and Emergency Communications Panel Discussion

- Donna Kain, Associate Professor of Technical and Professional Communications at East Carolina University presented the results of a survey designed to assess social media use in emergency management. She found that 55% of those surveyed are currently using social media, some are considering and some are not considering it. Generally, larger departments have adopted the technology and most are doing it in house.
- Warren Lee, New Hanover County Emergency Manager described how his department is using social media at the county level. They have been trying to find new ways to reach out to young people, college and high school students. Facebook and Twitter are used by the whole county, not

just emergency management and they get immediate feedback. Social media is added to their existing use of traditional media: print, newspaper, radio and television. Hurricane Irene was their first time using social media during an event and they had a 300% increase in followers during that time. They also use Youtube and Flickr for real time photos and video.

- Roberta Thuman, Town of Nags Head Public Information Officer started using Twitter during Hurricane Irene. She is a one person office and was very aware that each of her messages, while real-time and locally oriented had a global reach. She found that she had to keep her emotions in check and be careful about what information was shared via social media. Prior to the emergency, it is important for the communicator to establish a relationship with the users and a tone. The communications officer puts a face on the Town and Twitter helps people with second homes in the area get real-time and important information.
- Daren Brabham, Assistant Professor of Communications at UNC- Chapel Hill, advises new users of social media to do their research first before they jump into it. He said most people who get into social media for communications don't have a plan for staffing a position. One important part of the plan is to set measureable goals and develop policies. To be effective with social media, you should tweet several times a day and post to Facebook a few times a week. You should have a plan for both positive and negative engagement with the public. Expect the voice of dissent and your words to be twisted. Still, social media is a powerful way to engage with the public.

News Media and Emergency Management Community Interactions Panel

- Julia Jarema, Communications Officer for the NC Department of Public Safety, overviewed the ways that traditional and social media were used by the North Carolina Division of Emergency Management during Hurricane Irene. They had a bit of a challenge in that their agency name and web address changed shortly before the storm. NCEM received a high volume of requests from the national media. A lesson they learned was that social media and even traditional media does not always reach those they need to reach, due to power outages. They are improving and dedicating resources to more electronic communication.
- Nate Johnson, weather producer/meteorologist at WRAL-TV , described the trends in public information toward a more probabilistic forecasting and different graphical representations of the forecast so that people can better understand the uncertainty. Most people have an understanding of a 30% chance of rain, but a 30% chance of hurricane force winds is very different. A press conference is still a good way for emergency managers to get information out. If emergency managers can take call from the news media, they should because they be talking on the air and should get the best information. It is important that even though everybody has a piece of a message, all media should speak with one voice to avoid a mixed message in which people will hear what they want to hear.
- John Cole, Warning Coordinator Meteorologist, National Weather Service Weather (NWS) Forecast Office in Newport, overviewed the threat assessment briefing method of communicating forecast information to the public and the DSS research project which examined the gaps in risk communication. After Hurricane Irene, NWS had Town Hall meetings in three highly impacted counties to explain their products and services. They found that people were surprised at the magnitude of the storm surge, especially when Irene was downgraded to a Category 1 storm.

- Skip Waters, Chief Meteorologist, WCTI-TV ABC NewsChannel12 and WFXI-WYDO FOX EASTERN CAROLINA, overviewed the history of the adoption of social media by their news corporation. Although it is more work, Facebook and Twitter have become important. They noticed during the tornado outbreak last year that Facebook started to pick up much more traffic. It was useful because the information was "hyperlocal" and people provided verification of weather events on the ground. When Hurricane Irene hit, he picked the phrase "This is going to be a big deal" and repeated it through the storm. For some people that lost power, the social media was their main source of information through smart phones. About social media, Skip advised, "Ease into it, if you stay local, it will be a powerhouse."

Communication with Maps and Graphics Panel

- Tom Allen, Associate Professor of Geography; Director, RENCI Regional Engagement Center at ECU, introduced the topic of communication with maps by reminding the audience that all maps are lies since they are flat images depicting a sphere. Researchers are trying to gain a better understanding of how people interpret maps to improve their use. Colors are important and cartographers should be aware of the problems colorblind people may have. He outlined guidelines to map development that should be used for improved communications.
- Tom Crawford, Associate Professor of Geography, East Carolina University, described a research study conducted at ECU that used eyetracking, heart rate, skin response and brain response technology to better understand how people react to hurricane tracking maps. They used a risk perception and behavior model and compared different depictions of the cone of uncertainty. Participants responded that they preferred the more colorful map, but they did not answer more questions correctly.
- Rich Bandy, Lead Meteorologist, National Weather Service Weather Forecast Office in Newport, said that the only way that the weather service can provide local information is by using maps, an improvement over the text reports in the past. Confusion exists about what the cone of uncertainty means, so they have developed other products that are more probabilistic. The tropical impact graphic has wind, coastal flooding, inland flooding and tornado information. They are developing more user-friendly graphics, and using above ground flooding levels, but in many areas it is difficult because the topography is extremely complex. They are using social media and placed commemorative Hurricane Irene plaques in Manteo and Columbia.
- Brian Blanton, Senior Research Scientist, Renaissance Computing Institute, assists the North Carolina Forecast system by using high resolution wave models that are available three hours after a National Hurricane Center advisory is issued. They use a Google map platform to display the models and have developed a mobile app for the iphone and similar devices. He invited feedback on their products.

Keynote Speaker: Bill Read, Director of the National Hurricane Center

Bill Read discussed the Hurricane Forecast Improvement Project with its 10 year goals of improving weather prediction model forecasts and guidance. They have done well with track recently, but looking at rapid changes in intensity. Hurricane Irene was a success, but not perfect. With Irene everything was in slow motion. They want to improve track error by 50% and it is much better now than in the past. He said there is no "justa" tropical storm. The time and endurance of the wind on an object make a big difference. We need to understand that people are in denial of bad things happening to us. It is a natural human response, but we need to learn to be proactive. Hurricane season has started early.

Lessons from Hurricane Irene

- Don Aschbrenner, Disaster Recovery Manager for the North Carolina Department of Transportation (NCDOT), described the impacts on NCDOT and the highways from Irene. He described the breaches of NC12 on the Outer Banks and the NCDOT response. They had a debris management plan and that worked well, but FEMA questioned it. To date expenditures were \$39 million and FEMA provided \$28 million.
- LTC Robert Lee Ezzell, North Carolina National Guard, described the response of the military during Hurricane Irene. They pre-staged forces in North Carolina for the storm. Most personnel were deployed in eastern North Carolina. There were 33 life-saving missions conducted with local partners. The military hauled water and fuel to affected areas. They need to improve the coastal response evacuation plan and their people also need to know if they live in a flood zone.
- Justin Gibbs, Hyde County EM Coordinator, described his very rural county in which the principle communities are separated by 23 miles of water. They needed 24 hours to evacuate Ocracoke Island because access is only by ferry. He described their operational timeline, the number of people impacted and the numerous resources that assisted from as far away as the Greensboro Fire Department.
- Ann Keyes, Washington County EM Coordinator, knew that something big was coming and hosted a pre-hurricane briefing with all her county emergency responders and private partners. They have citizens that needed to be moved. Their biggest impacts were damages to infrastructure and mosquito problems in the aftermath of the storm. Communications were difficult due to internet being down.
- Joe Stanton, NCEM Recovery Section Chief, overviewed the 38 counties that were affected by Hurricane Irene. The department distributed \$29 million in funds. They implemented best practices and did a great job at documenting their costs and their outreach program worked very successfully. There was confusion about the emergency declaration and the relationship with FEMA was difficult. They were not prepared for the housing issues that occurred, especially since FEMA no longer uses their trailers and recovery planning needs some improvement.
- Lee Stocks, State Relations Disaster Liaison, American Red Cross, said that 58 of the 86 shelters that were opened during Hurricane Irene were Red Cross shelters. They have the on-going challenge of training people for managing shelters and they had a communications gaps about the feeding needed by communities. Their food supply chain, however, worked the best ever and they had good areas to set up their mobile kitchens. They want to do better by assigning liaisons for each county.

- Brad Thompson, North Carolina Office of Emergency Medical Services, explained that their agency had some challenges during Hurricane Irene. Many volunteers had signed up, but when called, they did not come forward. Many shelters were not prepared for special medical needs. The agency used community colleges, but found that needed to be changed. Gaps exist in nursing home hurricane plans that have been mandated, for example, many did not have a staffing back-up plan.

Research Projects from ECU and Partners- Poster Presentations

Center for Sustainable Tourism	Effects of Weather and Climate on Tourism Business Decision-Making
Ian Conery	Overwash
Center for Sustainable Tourism Donna Kain, Pat Long, & Huili Hao	Crisis Communication in Tourism
Center for Sustainable Tourism Huili Hao, Pat Long, Whitney Knollenberg, Rebecca S. Powers, Ken Wilson, Donna Kain, & Catherine Smith	Employers' and Managers' Perception of Drilled Oil Risks for Coastal North Carolina's Tourism-Impacted Businesses and Organizations
RENCI @ ECU Michelle Covi & Donna Kain	Sea Level Rise Risk Perception and Communication
Robert Munroe	A Geospatial Analysis of El Nino / Southern Oscillation Forced Precipitation across the Gulf of Mexico and Southeast.
Center for Sustainable Tourism Haley Winslow & Alex Naar	Hurricane Impacts and the NC Coastal Tourism: The Case of Hurricane Irene
Center for Natural Hazards Research	Should I Stay or Should I Go: How households make the evacuation decision
Alice Anderson and Stephanie Richards	Mosquito Control after Hurricane Irene
Daniel R. Petrolia, Craig E. Landry; Keith H. Coble, Christopher M. Sparks	Risk Preferences, Risk Perceptions, and Demand for Flood Insurance
Dr. Catherine F. Smith, Cliff Nelson, Amber Foreman, Dr. Donna J. Kain, Michelle Covi, Dr. Kenneth Wilson	Hurricane Watches and Warnings: Different publics respond differently (Poster based on results of study funded by NC SeaGrant R/BS19 URB #08-0296);

Presenter Information

Keynote Speaker: Bill Read, Director of the National Hurricane Center

William L. Read served in the U.S. Navy, where he was an on-board meteorologist with the Hurricane Hunters. He began his weather service career in 1977 with the National Weather Service test and evaluation division in Sterling, Virginia. He served as a forecaster in the Fort Worth and San Antonio, Texas offices before becoming the severe thunderstorm and flash flood program leader at the National Weather Service headquarters in Silver Spring, Maryland. Read was appointed to direct the Houston/Galveston weather forecast office in 1992 and led it through the National Weather Service modernization and restructuring program of the mid 1990s. He was also part of the Hurricane Liaison Team at the National Hurricane Center in Miami when Hurricane Isabel came ashore on the Outer Banks of North Carolina in September 2003. Bill Read is now the director of its Tropical Prediction Center, which includes the National Hurricane Center and two other divisions, in Miami, Florida. Read previously served as the center's acting deputy director between August 2007 and January 2008.

Panelists—Social Media and Emergency Communication

Donna Kain, Associate Chair, Department of English; Research Faculty, RENC1 at ECU

Donna Kain joined the ECU faculty in the fall of 2004 after two years as an Assistant Professor in the Technical Communications Department at Clarkson University in Potsdam, New York. She has taught courses in rhetoric, technical communication, writing for business and industry, digital video production, and Web design. Her recent research includes the rhetoric and instrumental discourse of the Americans with Disabilities Act and related public policies, information technology applications for the classroom, and the uses of genres in professional settings. Her professional positions have included senior staff analyst for Compuware Corporation, Milwaukee, Wisconsin; technical writer/editor for Engineering Animation Inc., Ames, Iowa; and Web site manager for the Center for Agricultural and Rural Development at Iowa State University

Warren Lee, Director of Emergency Management, New Hanover County

Warren Lee is Director of New Hanover County's Department of Emergency Management and 911 Communications. He has responsibility for directing, coordinating and preparing all emergency management and emergency communications programs and managing the community's recovery from disasters and emergency events.

Warren has 21 years of leadership experience in Emergency Management. He has considerable background in all aspects of emergency management, including 18 years of fixed nuclear facility planning and exercising experience. He served as Emergency Operations Center Director for nine Presidential declared disasters, including hurricanes and winter storms.

Warren holds a bachelor's degree in science education from North Carolina State University. He is certified through the NC Division of Emergency Management and NC Emergency Management Association as Emergency Management Coordinator Type I. Warren is a graduate of the UNC School of Government's Municipal and County Administration Program

Roberta Thuman, Public Information Officer, Town of Nags Head

Roberta Thuman has worked in the public relations and public information fields for over 15 years, first for a Baltimore-based Internet security firm, and currently for the Town of Nags Head, where she has worked for 11 years. As Nags Head's public information officer, Roberta has provided information to the media and public through many storms and crises, most notably Hurricane Isabel in 2003 and Irene in 2011. She is a member of Dare County's Joint Information Section, which typically activates during county-wide emergencies, serving as a one stop shop for crisis - related information.

During Irene, Roberta used Twitter extensively to reach Nags Head's stakeholders. Since the hurricane, the Town has added a Facebook page to its information distribution toolbox but, thankfully, the Town has not yet had to use their page during a crisis. Roberta received a BA in English from the University of Maryland and graduated Phi Beta Kappa with an MA in English from ECU.

Daren Brabham, Assistant professor, School of Journalism & Mass Communications, UNC-Chapel Hill

Daren C. Brabham joined the faculty in 2010 as an assistant professor. He teaches public relations courses and conducts research into online communities and the role of new media in society.

As a doctoral student, he was among the first to publish research on crowdsourcing, an online, distributed problem solving and production model that utilizes the collective intelligence of online communities. A critical, qualitative researcher, his work focuses on the potential of crowdsourcing and social media to improve public participation in governance, in transportation planning, and, recently, for public health applications. His work in crowdsourcing and transportation planning has been supported by funding from the U.S. Federal Transit Administration.

His work has appeared in such publications as *Convergence*; *Planning Theory*; *Information, Communication & Society*; *First Monday*; and *The Routledge Handbook of Participatory Cultures*. Brabham is also a past columnist for the journal *Flow*, where he published short pieces of media criticism on a variety of topics relating to television, new media, and culture. He is the founding editor of *Case Studies in Strategic Communication*.

Brabham's professional experience includes user experience design, a broad range of public relations functions, and crowdsourcing consulting.

Panelists—Emergency Management Community Interaction during an Event

Julia Jarema, Communications Officer, NC Department of Public Safety

Julia Jarema has more than 20 years of public relations and marketing experience in North Carolina. She has served as Communications Director for the state's Rail Division, Turnpike Authority and Department of Crime Control and Public Safety. For the past three years, Mrs. Jarema has been the Public Information Officer for North Carolina Emergency Management.

Julia has provided information to the public and media on numerous emergencies and disasters including the drought of 2008, tropical storms Fay and Hanna in 2008, Nicole in 2010, the Christmas 2010 snowstorm, the April 2011 tornado outbreak and Hurricane Irene. North Carolina Emergency Management established Facebook and Twitter accounts following the April 2011 tornadoes and was able to use the tools extensively during Hurricane Irene last fall.

Julia received her BS in communications from Appalachian State University and is active in the North Carolina Association of Government Information Officers.

Skip Waters, Chief Meteorologist, WCTI-TV ABC NewsChannel12 and WFXI-WYDO FOX EASTERN CAROLINA

Skip Waters started at WCTI in April, 1982 and has just completed 30 years of service. Prior to WCTI, he was Chief of Weather Services at WEVU-TV ABC26 in Naples/Ft. Myers, FL., from October, 1976 to April, 1982. In that position he was the main on-air meteorologist and primary forecaster for an agricultural forecast office operated by the television company.

Skip is a native North Carolinian, born in Greensboro and raised in Morganton (Burke county) and Maxton (Robeson county). Skip attended the University of South Florida in Tampa in a 5 year hybrid degree program that took him to Florida State University for synoptic and severe weather and the University of Miami for satellite and radar courses. While in Miami, he had the opportunity to study and complete course work with John Hope and Dr. Neil Frank at the National Hurricane Center (which was then located at Coral Gables).

Highlights of his career include correctly forecasting the March 28, 1984, tornado outbreak in eastern NC....correctly forecasting the Christmas 1989 snowstorm.....correctly forecasting and then on air for 10 hours straight during the April 16, 2011, tornado outbreak.....and correctly forecasting the track of Hurricane Irene followed by 60+ hours of continuous coverage prior to, during and after landfall.

Skip recently received the North Carolina Associated Press “Best Weathercast” award (small market category) for his on-air work during the April 16, 2012, tornado outbreak.

Nate Johnson, Meteorologist, WRAL

Nate has been a weather producer/meteorologist at WRAL-TV since November 2007. He has also worked as a data services meteorologist for Baron Services, Huntsville, Ala and a meteorologist/chief meteorologist for KTXS-TV in Abilene, Texas.

Awards & Recognition: 2006: Certified Broadcast Meteorologist (American Meteorological Society); Best Local TV Weather Person (Abilene Reporter-News Readers' Choice); 2005: Best Local TV Weather Person (Abilene Reporter-News Readers' Choice), Seal of Approval for TV Weathercasting (National Weather Association); 2003: Best Team Coverage – 2002 Floods (Texas AP Broadcasters Division III)

Education: Bachelor of Science in Meteorology, 1999, North Carolina State University, Raleigh, N.C.; Bachelor of Science in Computer Science, 2000, North Carolina State University.

John Cole, Warning Coordinator Meteorologist, NWS Weather Forecast Office, Newport

John Cole has over 25 years of experience as a meteorologist starting in Texas in 1985, where he served as an air quality meteorologist for AMI Systems in Houston Texas. He has worked for the National Weather Service since 1987, serving as a forecaster in Texas, Florida and Charleston, SC before becoming the Warning Coordination Meteorologist at the Newport office in 2003.

John has a B. S. degree in Meteorology from Florida State University and did graduate work in Atmospheric Science at Texas Tech University.

Panelists—Communication with Maps and Graphics

Tom Allen, Associate Professor of Geography; Director, RENCi Regional Engagement Center at ECU

Dr. Allen is the director of RENCi at ECU and the co-director of ECU's Center for Geographic Information Science. He is interested in understanding spatial and temporal change in the natural environment, particularly vegetation and related environmental processes in order to inform human actions. His research therefore emphasizes the development of geospatial technologies such as satellite remote sensing, geographic information systems (GIS), and global positioning systems (GPS). His primary areas of study are coastal and mountain environments of North America, Central America, and Fennoscandia. His current research projects include spatial analysis of coastal barrier morphodynamics; mapping mangroves and coastal change in Costa Rica; developing new algorithms for satellite remote-sensing monitoring and change detection; remote sensing and GIS data fusion for characterizing estuarine processes; and investigating biophysical patterns and processes in subarctic, alpine, and mountain environments.

Rich Bandy, Lead Meteorologist, National Weather Service Weather Forecast Office in Newport

Brian Blanton, Senior Research Scientist, Renaissance Computing Institute

Brian Blanton is a senior scientist at the Renaissance Computing Institute (RENCi), University of North Carolina at Chapel Hill. His research interests and expertise focus on the application of numerical models and high-performance computation to problems in coastal physical oceanography including tidal dynamics, storm surge, and forecasting of coastal water levels and waves. He is also interested in risk assessment communication, and has been involved in several

recent FEMA coastal flood insurance studies, including North Carolina and Region 3. He received his PhD in Marine Sciences from UNC-Chapel Hill on 2003.

Tom Crawford, Associate Professor of Geography, East Carolina University

Tom Crawford is an associate professor in the Department of Geography at ECU. He specializes in GIScience with research projects that use geospatial approaches to examine coastal hazards and human dimensions such as land use change, migration, and regional development. Geovisualization is important to much of Dr. Crawford's work. Recent work with colleagues at RENCI@ECU has examined human biophysical and cognition responses to alternative hurricane advisory map designs using biometric measures such as eyetracking.

Panelists—Hurricane Irene

Don Aschbrenner, Disaster Recovery Manager, North Carolina Department of Transportation

Don Aschbrenner is the Disaster Recovery Manager for the North Carolina Department of Transportation. He began working with disaster response and recovery activities in 1999 with Hurricane Floyd. Aschbrenner is responsible for the coordination of the preparation, response and recovery activities of the Department for both non-federally declared and federally declared events. He is a liaison between NCDOT and NCEM, FEMA and FHWA and the NCDOT Division of Highways SERT rep. He also manages the Debris Memorandum of Agreement program. Aschbrenner is an instructor for classes in Debris Management Planning, Recovery from a Disaster, and COOP and a member of the State Hazard Mitigation Advisory Group.

LTC Robert Lee Ezzell, North Carolina National Guard

LTC Ezzell enlisted in the North Carolina National Guard in 1983 as an Infantry soldier with the 1-120th Infantry. In 1986, he graduated from East Carolina and was commissioned as a Second Lieutenant in the Infantry. His assignments include: Infantry Platoon E/120th, Scout Platoon Leader 196 CAV, Company Commander C/119th, Battalion S4 119th, Logistical Planner 30th HBCT, assistant S3 30th HBCT, Battalion Executive Officer 120th, Executive officer 189th Infantry Brigade and is working at JFHQ in the J7 and taking over command of the 1st Battalion 120th Infantry Regiment.

In 2003, LTC Ezzell mobilized and deployed with the 30th HBCT for Iraqi Freedom as the 1-120th Executive Officer. His military education includes the Infantry Officer Basic Course, Infantry Officer Advance Course, Combined Arms and Service Staff School, and Commander General Staff College.

His military decorations include: Bronze Star, Meritorious Service Medal with 1st Oak Leaf Cluster, Army Achievement Medal, Army Achievement Medal with 1st Oak Leaf Cluster, Army Reserve Component Achievement Medal 4th award, National Defense Service Medal with 1st Oak Leaf Cluster, Global War on Terrorism Expeditionary Medal, Global War on Terrorism Service Medal, Humanitarian Service Medal with Oak Leaf Cluster, Combat Infantry Badge, Parachutist Badge and Air Assault Badge.

Ann Keyes, Washington County EM Director

Ann Keyes is a native of Washington County and prides herself on being an employee of Washington County Government for more than 35 years. In her current position as Director of Planning and Safety, she is responsible for managing and coordinating the efforts of local government that maximizes comprehensive community planning efforts that is land use Planning, Zoning, Floodplain Management and Public Safety and non-law enforcement activities such as: Emergency Management, and Zoning. Mrs. Keyes coordinated all emergency management response efforts for hurricane Bertha, Fran, Bonnie, Dennis, Floyd, Isabel and Irene. She also supervises the Inspections Department and supports the Mapping/GIS department. She is licensed as a Public Pesticide Operator for Washington County.

A few of her professional accolades include: Type 1 certification in Emergency Management, Hazard Materials Technician level, 2003 Emergency Management Responder of the Year Award from the Emergency Response Community of Washington County, recipient of the Washington County Human Relation Council's 2000 Humanitarian of the Year Award, recipient of the 1999 North Carolina State Coordinator Award for Floodplain Management, Community Rating System Coordinator, class 8 for Washington County and towns of Plymouth, Roper and Creswell, Storm Ready Weather Community Designation from the National Weather Services in 2004, Secretary for the RAP-LEPC, State Certified Floodplain Manager and 2006 recipient of the Colonel Phillip Nichlos Waters Award for outstanding achievement in Emergency Management and in 2011, received an outstanding leadership award from the Town of Roper for emergency response/recovery efforts during and after Hurricane Irene.

Justin Gibbs, Hyde County EM Director

Justin Gibbs is a native of Hyde County and has served in Emergency Management since 2007 when he was hired by to fill the position of Deputy Emergency Manager/E911 Database Administrator. He has served as Emergency Services Director since April 2011. Justin has a B. S. degree in Geology from East Carolina University.

Joe Stanton, NCEM Recovery Section Chief

Joe Stanton is employed by North Carolina Department of Public Safety in the Division of Emergency Management as the Public Assistance's Section Manager. In the last three years he has also served in the role as the Deputy Recovery Chief for the Division.

Joe has a background in corporate project management and community development. Joe has a Bachelor of Science in Business Administration from Western Carolina University and Disaster Management Certificate from the University of North Carolina at Chapel Hill.

Lee Stocks, State Relations Disaster Liaison, American Red Cross

Lee Stocks has been a volunteer with the American Red Cross since 1998. He has served on the Board of Directors of the Greensboro, NC Chapter in addition to his duties as the Chairman of Emergency Services. Lee serves in a leadership role for hurricane readiness response at the state level and regionally for hurricane states from Texas to North Carolina. Since 2008 Lee has served as the North Carolina State Relations Disaster Liaison. He works directly with North Carolina Emergency Management in Raleigh and throughout North Carolina in disaster readiness and response. Lee has supported American Red Cross hurricane responses in North Carolina dating from Floyd to Irene.

Media Coverage

- [The Daily Reflector](#)
- [WNCT-TV News](#)
- [WITN News](#)
- [ECU News Service](#)

We wish to recognize the following people for their assistance in organizing, facilitating, and supporting this event.

H. Douglas (Doug) Hoell, Jr., Director, NC Division of Emergency Management

Mike Sprayberry, Deputy Director, NCEM

Melissa Greene, Area 3 Coordinator NCEM

Charles Tripp, Area 2 Coordinator NCEM

Deirdre Mageean, Vice Chancellor, Research and Graduate Studies, ECU

Jamie Kruse, Professor, Department of Economics,
Director, Center for Natural Hazards Research

Tom Allen, Associate Professor, Department of Geography;
Director, RENCI Regional Engagement Center at ECU

Donna Kain, Associate Chair, Department of English; Research Faculty,
RENCI at ECU

Craig Landry, Associate Professor, Department of Economics,
Assistant Director, Center for Natural Hazards Research

Michelle Covi, Director of Outreach and Communication, RENCI at ECU

Chris Jackson, Administrative Associate, Center for Natural Hazards Research, ECU

Dianne Curtis, NCEM Eastern Branch Manager

Doug Solomon, PhD student in Technical and Professional Discourse, ECU