

2011 North Carolina Hurricane Workshop

a collaboration of

**NORTH CAROLINA
Emergency Management**

and

 East Carolina University.



The Second Annual NCEM-ECU Hurricane Workshop

May 18, 2011



The North Carolina Division of Emergency Management (NCEM) in partnership with the East Carolina University's Center (ECU) for Natural Hazards Research and the Renaissance Computing Institute Engagement Center at ECU (RENCI at ECU) held a Hurricane Workshop for Emergency Managers. About 100 emergency management personnel, ECU faculty, National Weather Service (NWS) meteorologists, and emergency technology specialists from RENCI attended the May 18, 2011, workshop at The Murphy Center at ECU in Greenville. The workshop provided participants with information about the technological improvements in hurricane forecasting, response, and decision-making. Highlights included:

Storm Surge Toolbox and Products

Jamie Rhome, Storm Surge Program Manager, National Hurricane Center

[Video](#) | [Presentation](#)

Richard Bandy, Meteorologist in Charge, Newport/Morehead City NWS

[Video](#) | [Presentation](#)

Rhyme and Bandy discussed the National Hurricane Center's (NHC) Storm Surge Product Decision Support Wedge which offers a three-tiered approach to utilizing available storm surge data for decision support. The 24-hour to 28-hour window is often critical for decision-making. It is important not to focus solely on one storm surge product within this window. Storm specific uncertainties are accounted for in the probabilistic storm surge (p-surge) product, while the MOMs and MEOWs provide a worst case storm surge estimate at a regional level. The Hurricane Local Statement (HLS) available from the NWS anWeather Forecast Offices summarizes local impacts from storm surge.

River Flood Toolbox and Products

Jeff Dobur, Hydrologist, Southeast River Forecast Center

Michael Money Penny, Hydrologist, Raleigh NWS

Jeff Orrock, Warning Coordination Meteorologist, Raleigh NWS

[Video](#) | [Presentation](#)

Dobur and Money Penny informed participants of the many tools available to predict river forecasts and warning and well as flood outlooks and probabilities. These tools include:

- Inundation Mapping
- Crest-to Crest Relationships
- Model River Guidance
- Flash Flood Guidance
- Observed and Probable Rainfall Totals
- Real-time USGS Monitoring of Major Rivers in Eastern NC

Orrock discussed real time flood risk analysis and new river forecast and warning tools provided by National Oceanic and Atmospheric Administration (NOAA).

Storm Surge Products and North Carolina

Jamie, Rhome, Storm Surge Program Manager, National Hurricane Center

[Video](#) | [Presentation](#)

Hope Morgan, GIS Manager, North Carolina Emergency Management

[Video](#) | [Presentation](#)

Morgan discussed two databases; Integrated Hazard Risk Management (IHRM) and North Carolina State Preparedness and Resource Tracking Application (NCSPARTA). These two databases help provide emergency managers and the general public with real-time spatially-enabled decision making and notification of river flooding. All data collected by the GIS division of NCEM can be found at www.ncfloodmaps.com.

Usability of NWS Products and Services and Risk Communication

Ken Galluppi, Director, Disaster and Environment, RENC, UNC Chapel Hill

This session allowed participants to provide input on the value and effectiveness of current NWS products and tools. Breakout sessions were also provided in the afternoon to further discuss storm surge and river flooding tools and how to make them more effective for emergency managers.

New Approaches to Evacuation

Dr. Rachel Davidson, University of Delaware

[Video](#) | [Presentation](#)

Keynote speaker, Dr. Davidson, provided participants with a new approach to regional hurricane evacuation and sheltering. The new approach included a broader decision frame focused on the following variables:

- New objectives (e.g., safety, cost)

- New alternatives (shelter-in-place, phased evacuation)
- Consider uncertainty in hurricane scenarios explicitly
- Consider evacuation and sheltering together

2011 Hurricane Outlook

Jeff Orrock, Warning Coordination Meteorologist, Raleigh NWS

[Video](#)

Orrock ended the workshop with a discussion of the 2011 hurricane season. First Orrock discussed the 2010 Season and characterized it as 'Active' season with 19 named storms and 12 hurricanes. While NOAA's Hurricane Outlook had not been released at the time of the workshop, Colorado State and North Carolina State University outlooks predicted an average of 13-16 named storms and 7-9 hurricanes for the 2011 Hurricane Season. Orrock concluded by saying to prepare for the worst and hope for the best during any hurricane season.

Media Coverage

- [WNCT Channel 9 News](#)
- [WCTI Channel 12 News](#)
- [News 14 Carolina](#)

Helpful Links

- [NWS River Flood Checklist](#)
- [River Flood and Warning Toolbox](#)
- [Storm Surge Forecast Toolbox](#)