Perspectives on Resiliency

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The Resilience Cycle

Photon to Forecast

Photo credit: Washington Post

Monitor

Warn

Weather-Ready Nation
National Oceanic and Atmospheric Administration

Recover

React

WeatherRadio
A Tornado Warning for Rayne, LA is in effect until Saturday, March 5, 2011 at at 02:00:00 PM CST

1:32
Saturday, 5 March

slide to unlock

Photo credit: ctpost.com

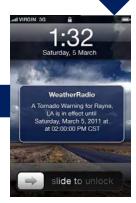Photo Credit: University of Tennessee Athletics and UTSports.com

Photo credit: tgdaily.com

Weather-Ready Nation

- **Building community resilience in the face of increasing vulnerability to extreme weather and water events**
- **NOAA lessons-learned from 2011 tornado season**
  - Focus on the "last mile": does the message delivered equal the message received?
  - Incorporate social science into improving the communication of watches & warnings
  - Issue impact-based forecasts and warnings
  - Use graphics to show affected areas
  - Improve outreach and education
- **Consistent and more accurate forecasts improve response**
  - FEMA prepositions recovery assets
  - State & local emergency managers prepare local communities
  - State & local authorities focus on hardening assets and response

Social Science Implications

- **Impact-based forecasts & warnings**
  - "2 inches of snow per hour" → "Roads will become impassible"
  - "Category 3 hurricane" →
    - "Winds will blow at 110-130 miles per hour"
    - "Devastating damage will occur"
    - "Trees will uproot and block roads"
    - "Electricity and water will be unavailable for several days to several weeks"

- **Is there a limit to lead time?**

Photo credit: Yourweatherblog.com

Photo credit: Beaumont Times

Photo credit: Orlando Sentinel

Success Story – Moore, OK

- **EF-5 tornado, May 20, 2013**
  - **200 mph winds**
  - **1 mile wide**
- **Timeline**
  - **May 14: threat identified**
  - **May 15: coordination with city**
  - **May 16: FEMA coordination and prepositioning of assets**
  - **May 20: 31 minutes warning**
- **24 fatalities – significant reduction in loss of life**
  - **Joplin, MO, May 22, 2011: 158 fatalities**
  - **Southeastern U.S., April 27-28: 190 tornadoes, 311 fatalities**

Summary

- **The Weather-Ready Nation program so far:**
    - **Unprecedented amount of coordination at all levels of government**
    - **Key partnerships with industry, academia, and the media**
    - **Frequent education and outreach events**
    - **Leveraging media the public uses to clearly communicate**

- **It appears to be working....**