



"Blow Everything You've Got!"

Services and Support for the Historic Yazoo City, MS - Violent Tornado

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Sunny Day Preparedness philosophy



- Visit EMs frequently
- Set up NWSChat and iNWS for them on visits to their offices
- Develop personal relationships & trust
- Seek to understand needs of EMs



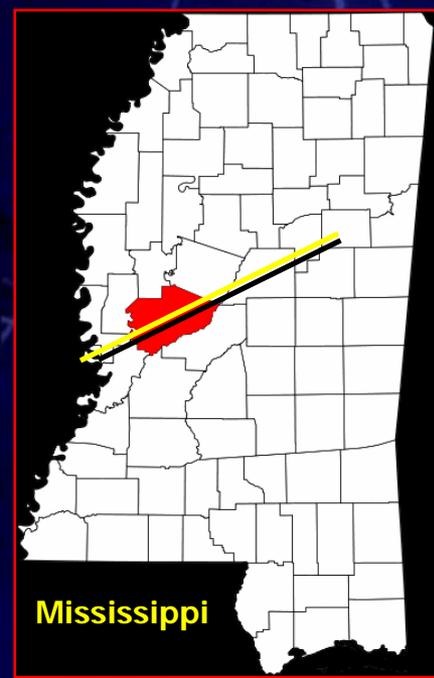
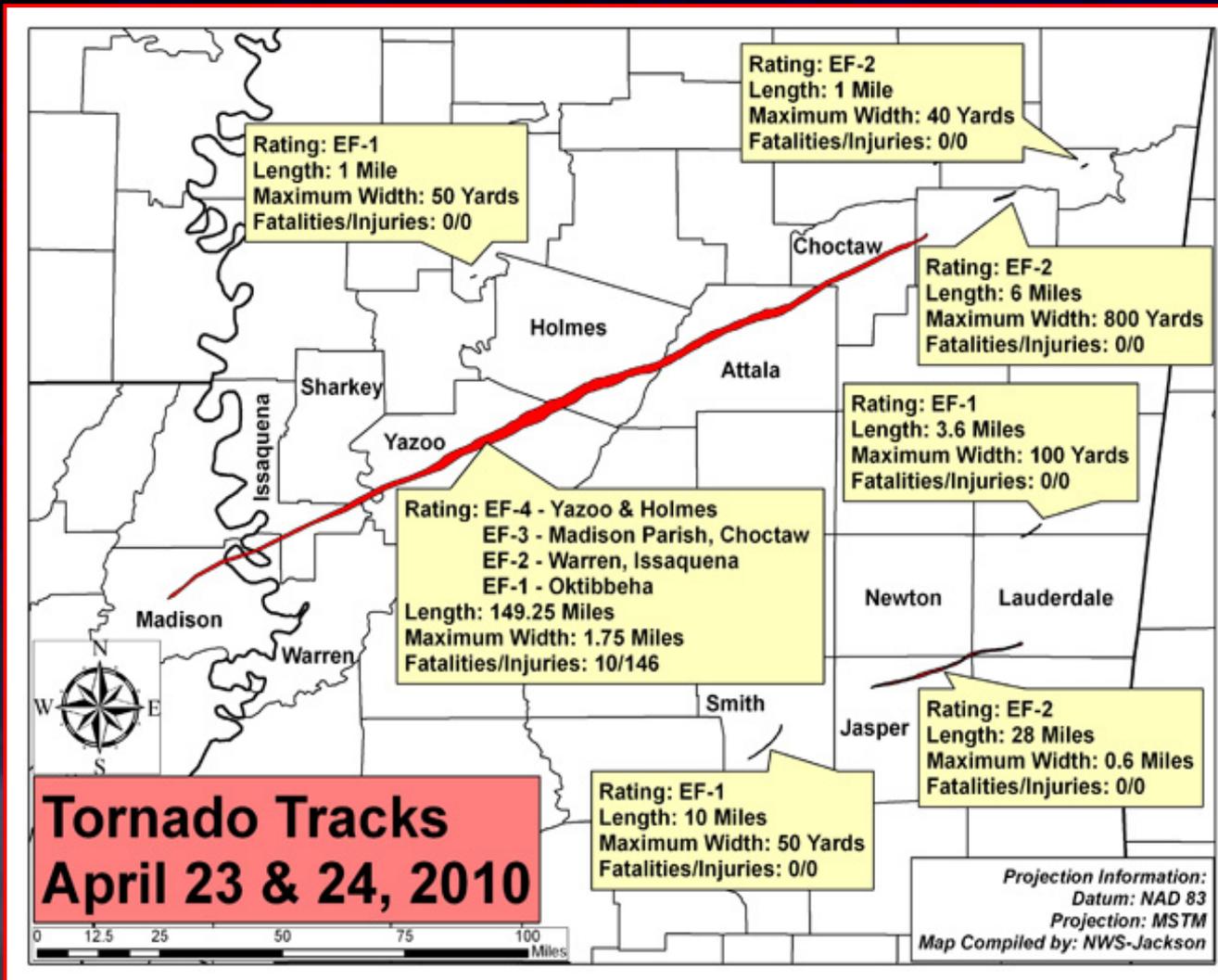
Operational Philosophy



- Communicate weather for Decision Support
- Push mentality – do not make them come to us
- An event is never “covered” – there is always more we can do
- Proactive staffing plans to ensure DSS support



April 23-24 Tornado Outbreak





Long Track Tornado Overview

- **EF-4** with 10 fatalities and 70+ injuries
 - Deadliest tornado in MS since 1992
 - 9th deadliest in MS since 1900
- **149 mile** continuous path length the *fourth longest* in MS history
- **1.75 mile** max width
 - Widest recorded in MS history



Initial Decision Support Services for Event



- **Hazardous Weather Outlook**

- Began mentioning severe weather a week in advance
- As event approached, ratcheted up wording:
 - 72 hours: "Outbreak of severe thunderstorms"
 - 48 hours: "Strong tornadoes possible"
 - 36 hours: "Strong...long tracked tornadoes"
- In post event hotwash - EMs / other customers reported:
 - Advance notice helped them prepare their operations and the community
 - Wording such as "**Strong Tornadoes**" played a key role in raising their awareness "above a normal situation"

"Non-baseline" Pre-event Decision Support Service



- **Graphiccasts**

- Graphically depict DSS weather info
- Most viewed products on NWS JAN site

- **Conference Calls/Go-To-Meetings**

- Hold a weekly briefing each Monday, potential was discussed on this call
- Held special calls on 4/22 and 4/23
 - Nearly 100 decision support entities participated, including MS/LA state EMA, ARC, county/muni EMA, HAMS, colleges, state agencies

“Non-baseline” Pre-event DSS



- **Multimedia Briefings**

- Done via Camtasia and posted to our website
- MMB provided briefing on severe potential *two days prior* to event

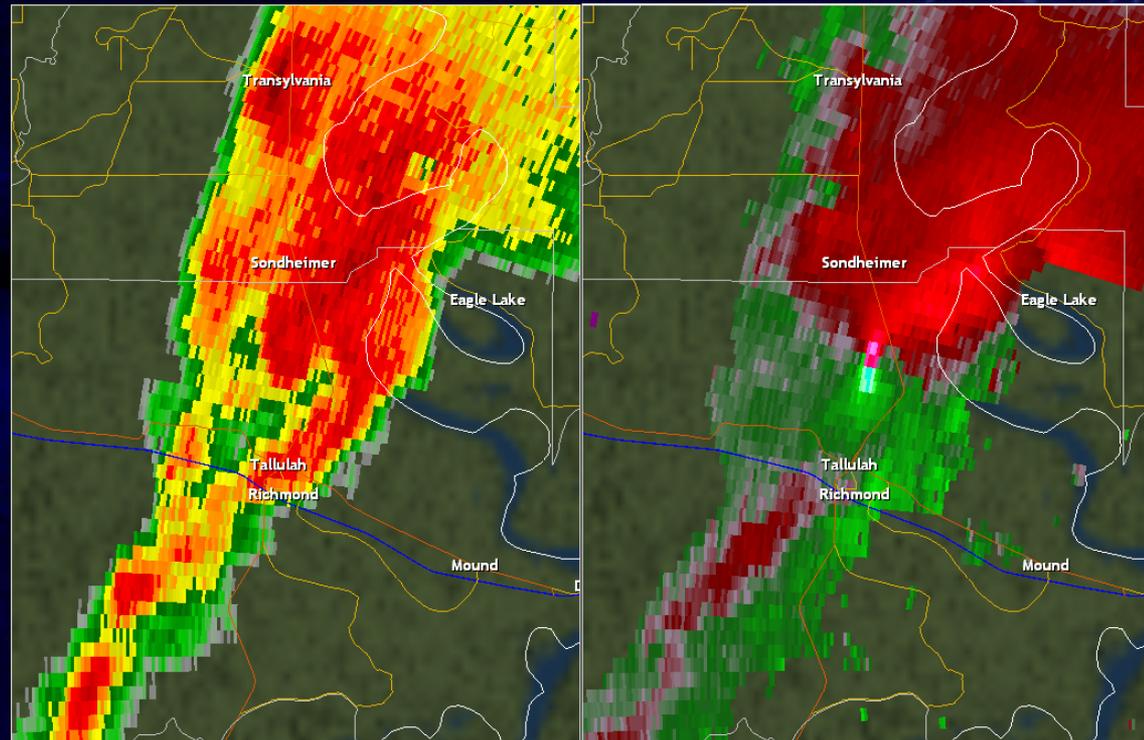
- **Special Press Release**

- Worked with Mississippi EMA public affairs to distribute special press release regarding potential magnitude of the expected severe weather episode *day prior* to event
- Distributed by MEMA to their standard statewide media distribution list

During the Event



- **Madison Parish**
 - Frequent calls to SO
 - Rapid feedback of *"large tornado on ground"*
- **NWSChat**
 - Providing DSP info to Vicksburg/Lake Providence
 - Reports from Lake Providence FD of major damage at chemical plant in Omega, LA



**KDGX 88D 0.5 deg Z and SRM – 1618Z
4/24/2010**



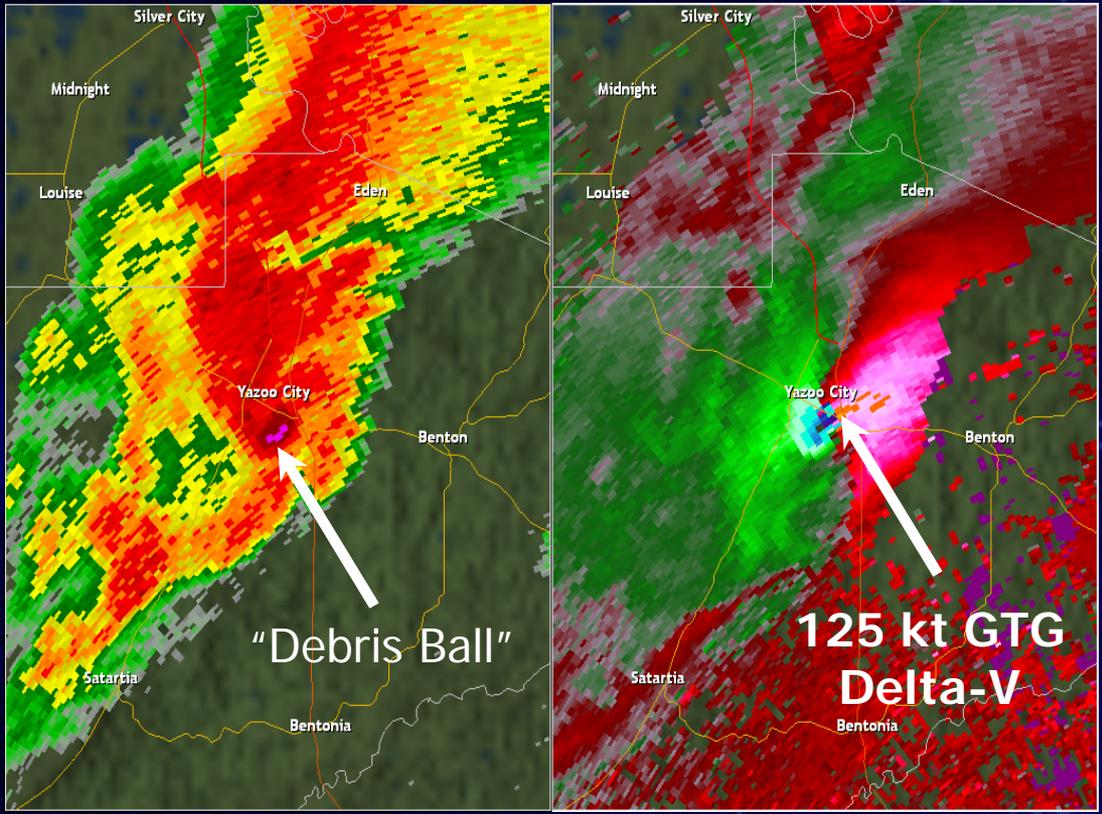
During the Event

- **Tornado Emergency**

- Began at 1148 am
- Continued til 107 pm
- Received continuous reports via NWSChat and TV (SA Display)

- **Yazoo County**

- Call from WCM to EM while storm still a couple of counties to the SW
- Advised of potential catastrophic nature of situation



*KDGX 88D 0.5 deg Z and SRM – 1714Z
4/24/2010 EF-4 Damage Occurring on
SE Side of Yazoo City*



"Non-baseline" Event DSS

- **Website**

- Placed a banner at top of page stating large dangerous tornado moving across central MS
- Updated every 15 minutes; linked to warning text
- Short-term Graphiccasts frequently updated showing convective evolution

- **Continuous Briefing/Go-To-Meeting**

- Run a continuous GTM in which a forecaster provides routine updates using GR2Analyst, web graphics, etc.
- 44 customer/partners participated
 - Including MS/LA state EMAs, City of Vicksburg, several counties along the tornado path

Personal Communication during the tornado



- Phone call made to the Yazoo County EM by WCM
- Recommended she *"Blow and Sound off everything you have"*
- She responded by blowing sirens continuously for over 25 minutes and sending out emergency vehicles
- She was told that *"those efforts saved lives"*



Post-Event DSS



Yazoo County Support post-storm

- Deployed ER-Met and trailer to Yazoo County for the next storm system
- Clean up operation with hundreds of workers
- EM personnel very impressed



Storm Damage Surveys



- Deployed three teams to survey long track tornado
 - WCO in MEI and EMs assisted with east central MS surveys
 - WFO MEG helped with NE MS surveys
- Pre-developed templates, scripts, procedures enabled data to be rapidly distributed via web and text products
 - April 24th webpage the most visited page on WFO JAN site for the month of May



"Hotwash" Meeting

- Met with most EMs/media impacted by event
- Some key findings:
 - EM perspective: death toll would have been higher on a weekday (lots of people were at activities rather than home)
 - "PDS Watch", "Strong Tornado" and "Tornado Emergency" were effective!
 - Raises awareness of high end tornado potential
 - Role of socioeconomic factors in fatalities:
 - EM stated, "*area where 5 people were killed in Choctaw County was extremely poor – even if they heard the warning, no adequate shelter was nearby*"

Results of our philosophy



- Yazoo EM trusted NWS Jackson due to established relationships with staff
- The trust led to actions that saved lives
- That level of response only occurs when strong personal relationships exist



Results of our philosophy



- Based on NWS info...
 - Yazoo County Emergency Response Team canceled plans to participate in a homeland security exercise out of the county



- Communities of Weir (impacted by tornado) and Kosciusko (less than 10 miles from tornado) canceled outdoor events that would have had several thousand people participating

Reality Check



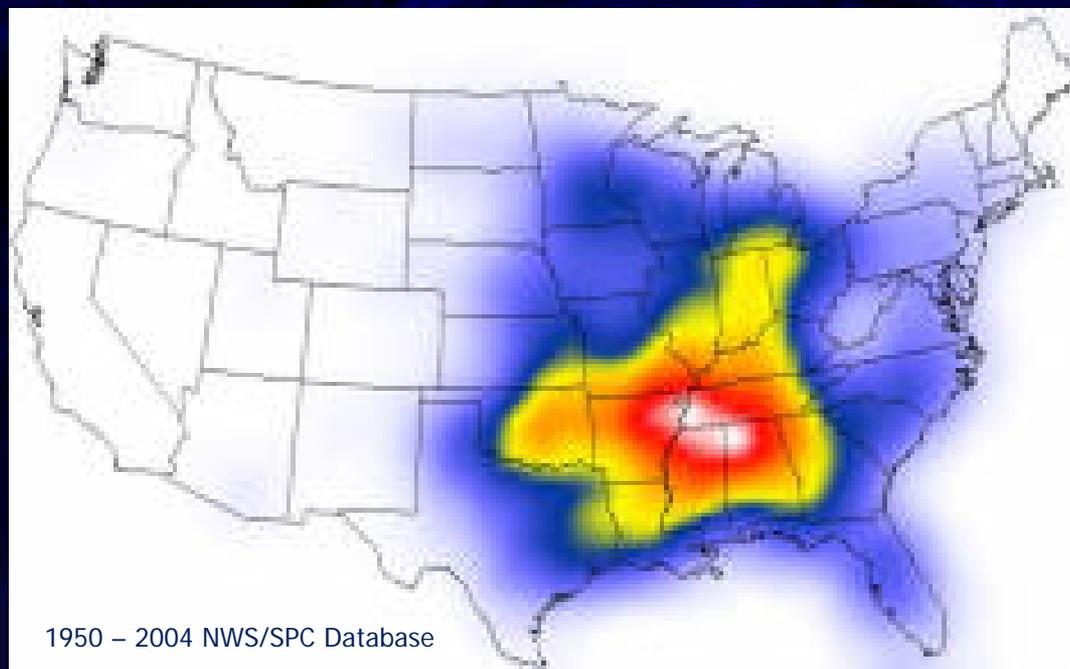
- Six of 10 killed were in **mobile homes** ... 2 in vehicles and 2 outside
- **3,100** homes impacted! Fatalities and injuries could have been significantly higher!
- Weak housing
- Some did not know of risk despite our efforts



Further Work Needed



- Improved local warning systems
- Societal Impact studies to improve public response
- Education about mobile homes & getting out of them



Ashley 2007: Map shows tornado fatality areas

Relationships are as important as the science!



- People often don't respond to those they don't know and trust
 - State EMA personnel said they knew how bad it was from the *"tone of Steve's voice on NAWAS"*
- Trust is critical when seconds count!
- Part of that trust comes from a feeling of knowing you're doing everything for them you can
 - Proactive and aggressive customer service!
 - Have to build those relationships when the sun is shining! (visits, conferences, etc.)



Questions or Comments?

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