

MAKE A KIT. MAKE A PLAN. STAY INFORMED.

FIVE STATE “FLOOD” PROJECT

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Overview

- Background – 2011 storms
- Disaster management process and CES
- Promising practices
- Issues and barriers
- Wrap up – points to ponder

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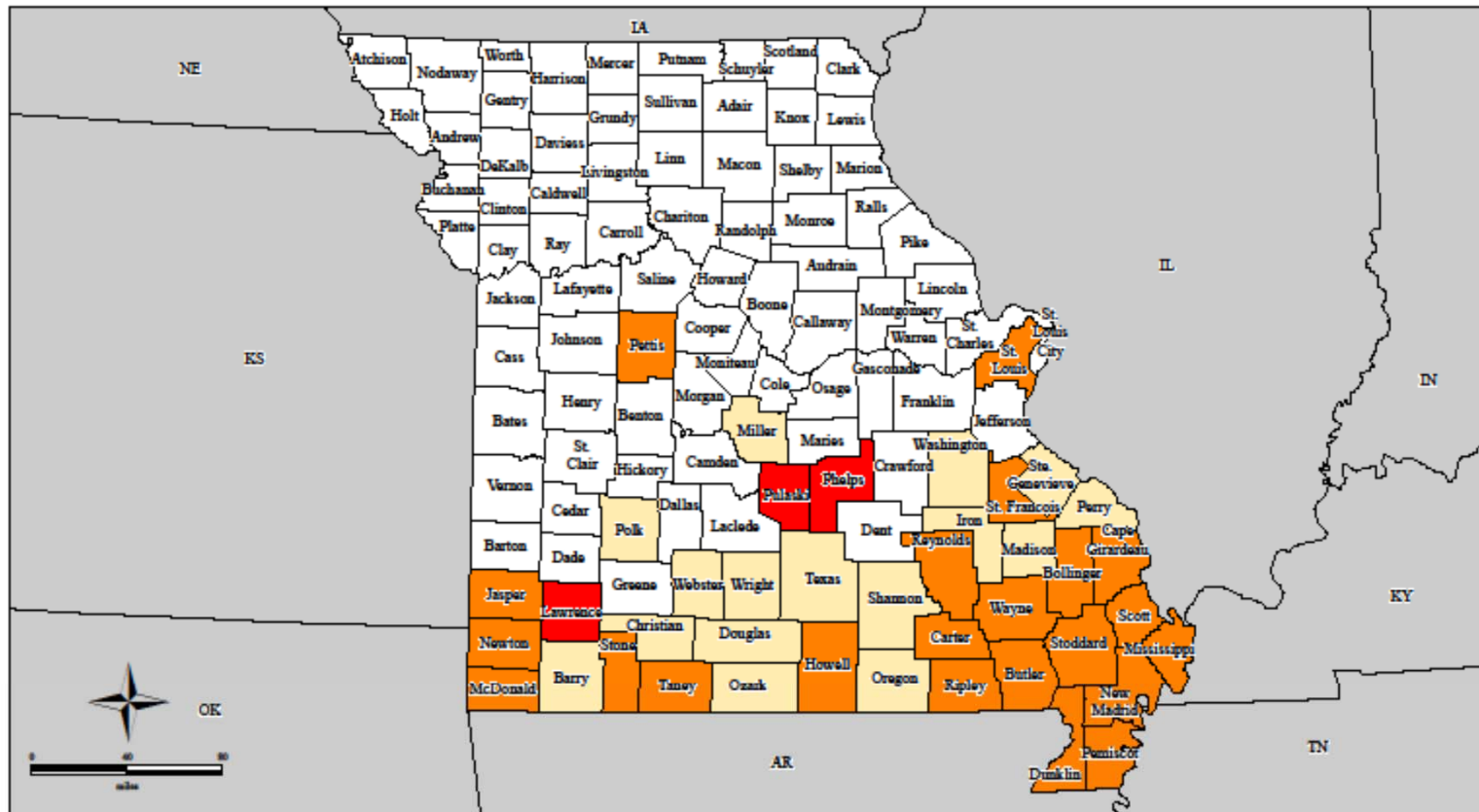
Background - The Perfect Storm

- **Spring storms 2011**
- **Impacts in lower Missouri and Mississippi river states (MO, AR, TN, KY, LA)**
- **Extension Disaster Education Network**
- **Five state effort**



Wikipedia, 2012

FEMA-1980-DR, Missouri Disaster Declaration as of 06/21/2011



Location Map



Legend

Designated Counties	
	No Designation
	Public Assistance
	Individual Assistance
	Individual Assistance and Public Assistance

All counties and the independent City of St. Louis in the State of Missouri are eligible to apply for assistance under the Hazard Mitigation Grant Program.



FEMA
ITS Mapping & Analysis Center
Washington, DC
06/21/11 - 16:03 PM EST

Source: Disaster Federal Registry Notice
Amendment No. 8 - 06/21/2011

MapID 199e6c5c9a0621111555hqprod

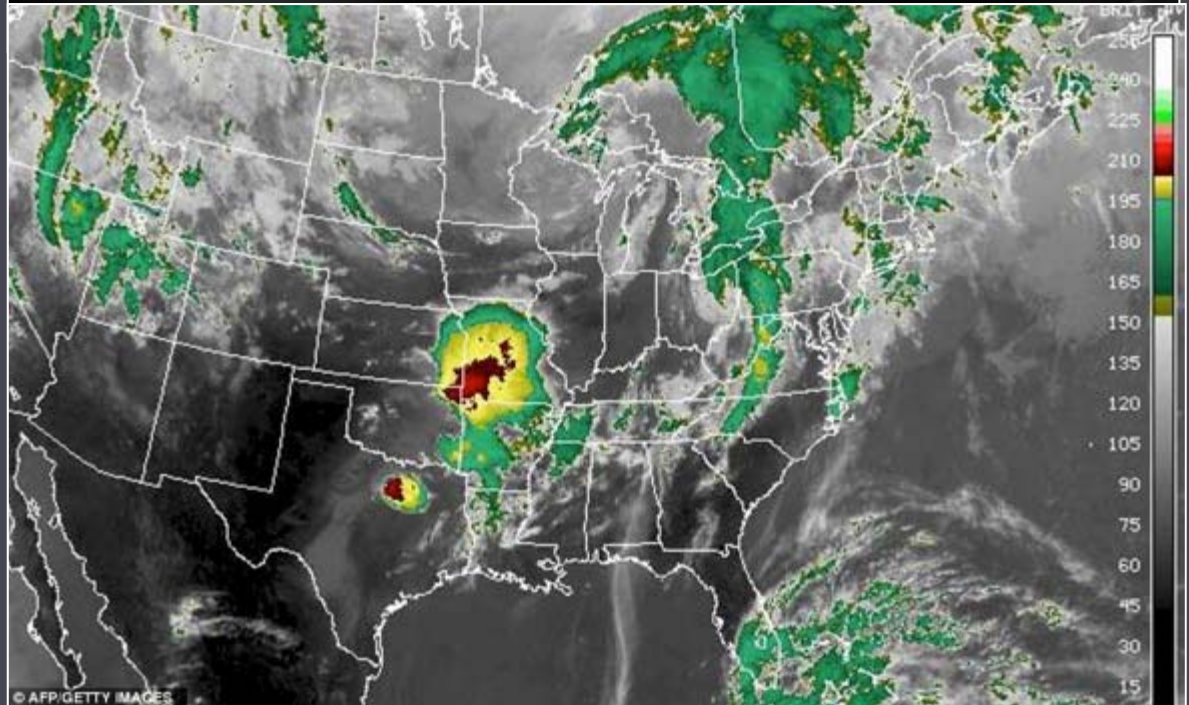
Bird's Point, MO, Post flooding, May 2011



1-mile wide EF-5
tornado approaching
Joplin, MO



Satellite view of
Joplin tornado



Joplin, MO Tornado Statistics

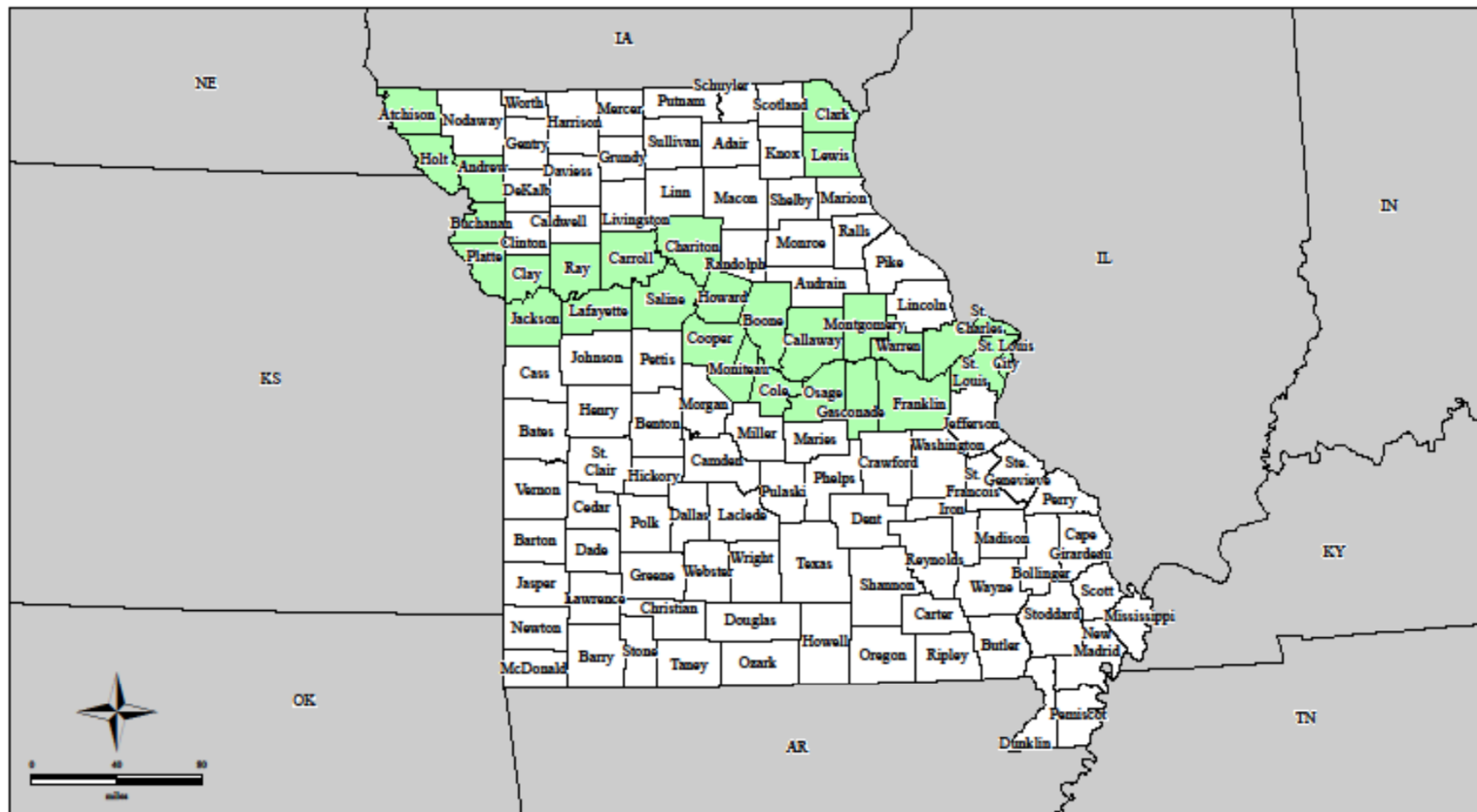
- 161 dead
- All people accounted for
- 8,000+ structures destroyed or damaged
 - 6,953 homes destroyed, 4,006 insured (57%)
 - 30% of retail businesses destroyed
 - 114 people living in unsafe homes
- 18,000 vehicles destroyed
- 5 schools destroyed (\$150 million rebuild cost)
- \$1 billion to \$3 billion in damages
- Twice the debris removal as 9/11 World Trade Center
 - 4.1 million cubic yards

7-story St. John's Medical Center has to be torn down. EF-5 tornado shifted it 4 inches on its foundation.



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FEMA-3325-EM, Missouri Disaster Declaration as of 06/30/2011



Location Map



Legend

Designated Counties

- Public Assistance, Category B
- No Designation

All counties are eligible
for Hazard Mitigation



ITS Mapping & Analysis Center
Washington, DC
07/01/11 - 11:12 AM EST

Source: Disaster Federal Registry Notice
06/30/2011

MapID 39ef56a62ad0701110911hqprod



The Missouri River
Satellite view of the
June 2011 flood

The Missouri River
close-up during the
Flood

In Holt County, MO
The River was bluff
To bluff, 15 miles
wide in places.

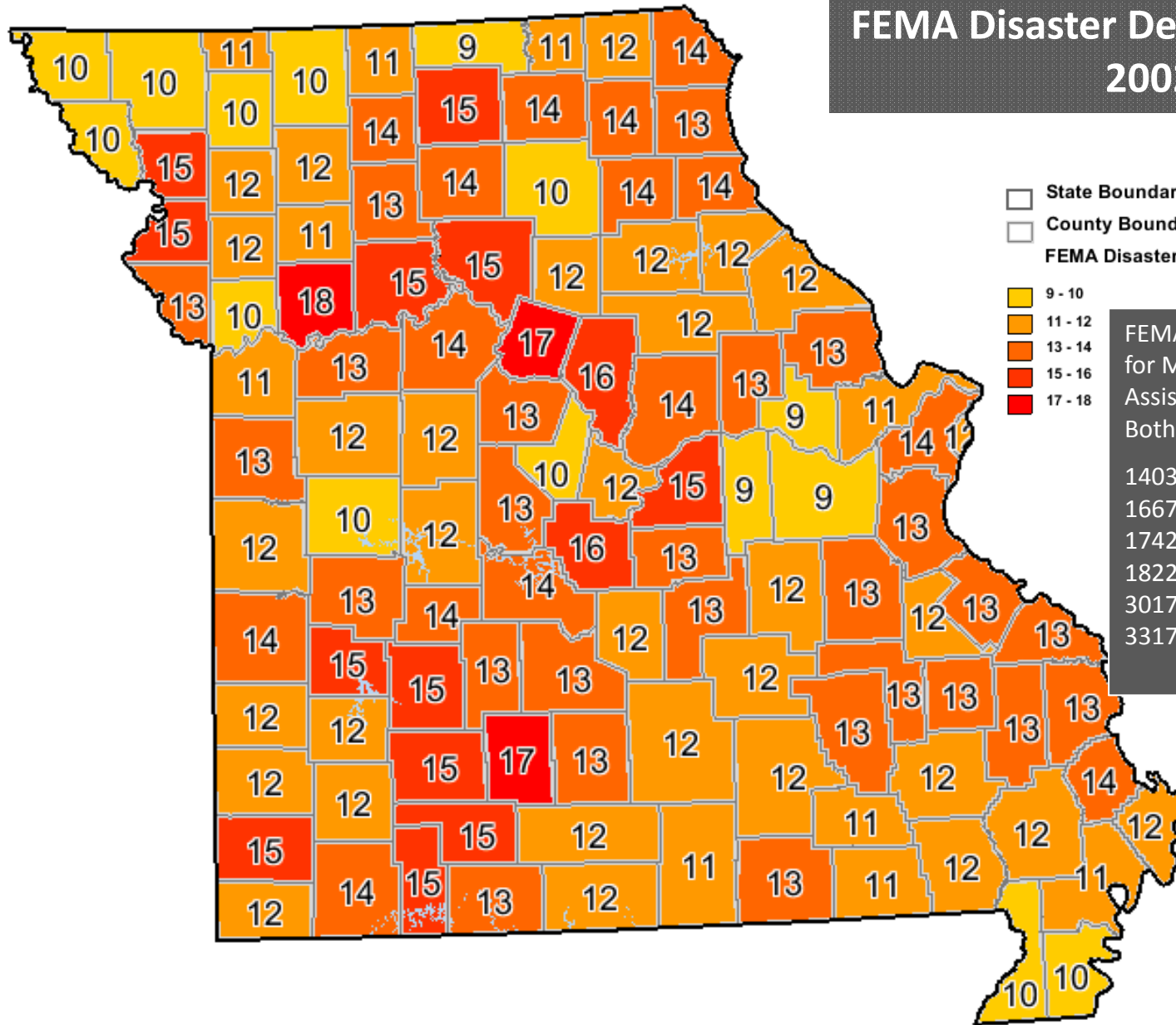


Hamburg, IA, interchange on I-29





FEMA Disaster Declarations By County 2002-2011



☐ State Boundaries, 2010 (Census, 2010)
☐ County Boundaries, 2010 (Census, 2010)
 FEMA Disaster Declarations by County, 2002-2011

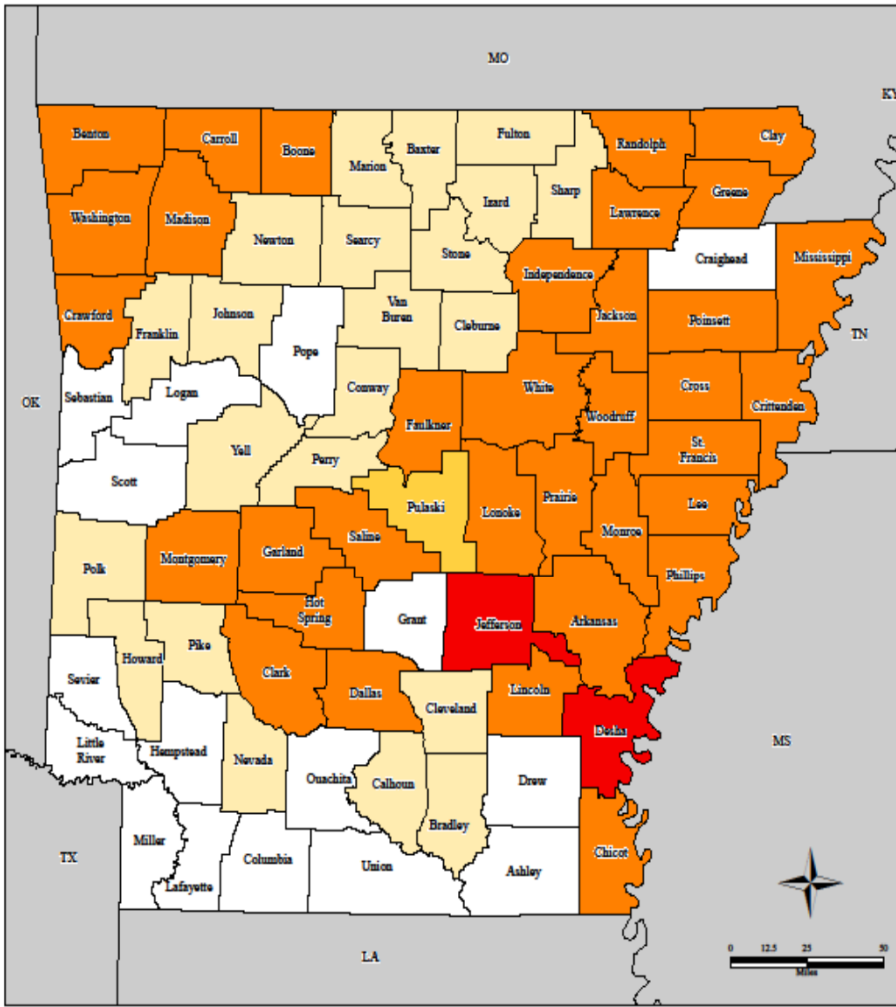
9 - 10
 11 - 12
 13 - 14
 15 - 16
 17 - 18

FEMA Disaster Declaration Numbers for Missouri Counties (Individual Assistance, Public Assistance, or Both), 2002-2011:

1403, 1412, 1463, 1524, 1631, 1635, 1667, 1673, 1676, 1708, 1728, 1736, 1742, 1748, 1749, 1760, 1773, 1809, 1822, 1847, 1934, 1961, 1980, 2292, 3017, 3071, 3232, 3267, 3281, 3303, 3317, 3325 and 4012.

Source: Federal Emergency Management Agency, Disaster Declarations, 2002 – 2011.
Map Generated On: 15 Feb 2012






FEMA-1975-DR, Arkansas
Disaster Declaration as of 06/16/2011



Location Map



Legend

- Designated Countries:**
- | | |
|---|--|
|  | No Designation |
|  | Public Assistance |
|  | Individual Assistance |
|  | Individual Assistance and Public Assistance |
|  | Individual Assistance and Public Assistance (Category B) |

All counties in the State of Arkansas are eligible to apply for assistance under the Hazard Mitigation Grant Program.



ITS Mapping & Analysis Center
Washington, DC
06/23/11 - 09:07 AM EST

Source: Disaster Federal Registry Notice
Amendment No. 9 - 06/23/2011

MapID 4030d5367c60623110858hqprod

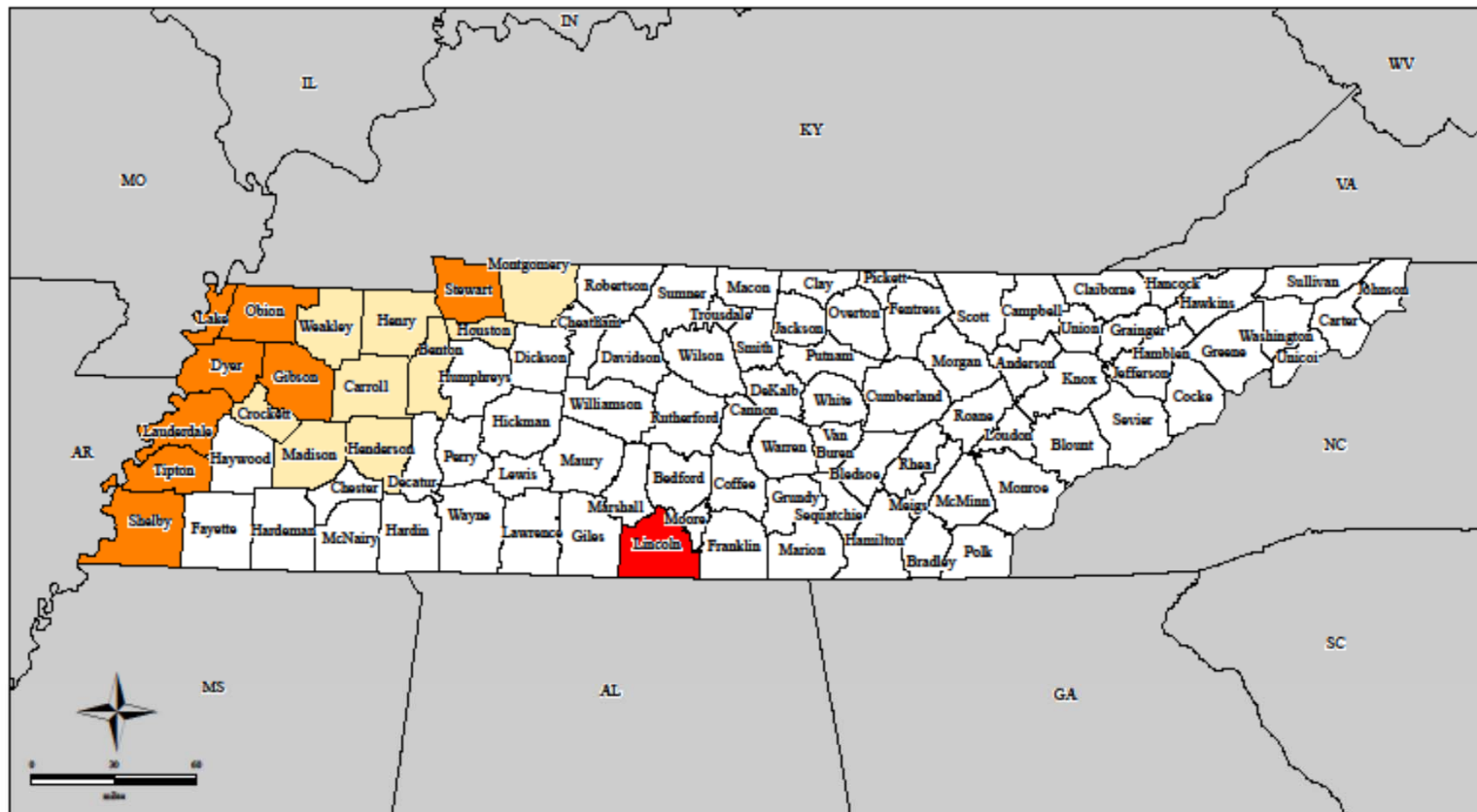


Cross County AR



Fordyce AR

FEMA-1979-DR, Tennessee Disaster Declaration as of 06/21/2011



Location Map



Legend

Designated Counties		Individual Assistance
No Designation		Individual Assistance & Public Assistance
Public Assistance		

All counties in the State of Tennessee are eligible to apply for assistance under the Hazard Mitigation Grant Program.



FIS Mapping & Analysis Center
Washington, DC
06/21/11 -- 11:25 PM EST

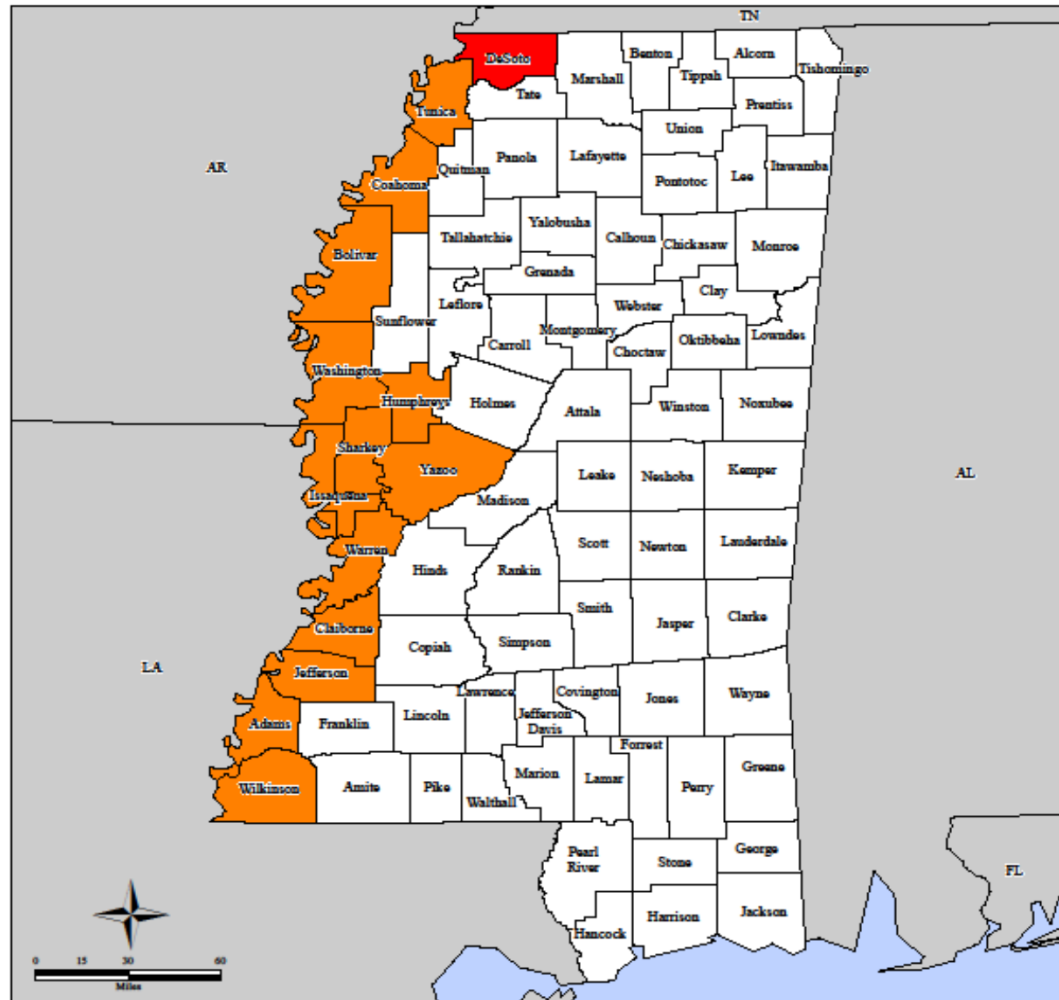
Source: Disaster Federal Registry Notice
Amendment No. 4 - 06/21/2011

MapID b126d4fb8e90621111459hqprod



West Memphis AR

FEMA-1983-DR, Mississippi Disaster Declaration as of 07/12/2011



Location Map



Legend

Designated Counties

- No Designation
- Individual Assistance
- Individual Assistance & Public Assistance

All counties in the State of Mississippi are eligible to apply for assistance under the Hazard Mitigation Grant Program.



*ITS Mapping & Analysis Center
Washington, DC*

07/13/11 - 09:55 AM EST

*Source: Disaster Federal Registry Notice
07/12/2011 - Amendment 2*

MapID 77191292a6a0713110921hprod

FEMA-4015-DR, Louisiana Disaster Declaration as of 08/18/2011



Location Map



Designated Counties

- No Designation
- Public Assistance

All parishes in the State of Louisiana are eligible to apply for assistance under the Hazard Mitigation Grant Program.



ITS Mapping & Analysis Center
Washington, DC
08/08/11 -- 14:25 PM EST

Source: Disaster Federal Registry Notice
08/18/2011



New Orleans, LA

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Discussion:

- **Craig Fugate, Administrator of FEMA tells us that “All disasters begin and end locally”**
- **What does he mean by this?**

Homes at
Big Lake Village
were flooded and
many that were
mitigated from
previous floods
took on water.



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Before



After

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Discussion: Why CES?

- **Is your state involved in disaster efforts?**
- **If so, why? How?**
- **If so, is there anything in writing that describes your involvement?**

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Cooperative Extension Service

- **We are educators.**
- **We provide research based information.**
- **We can facilitate and organize collaborative efforts at regional and local levels.**
- **We work in communities.**

Assisting survivors
at the MARC
(Multi-Agency
Resource Center)



MU Extension information
table at the MARC soon
after the disaster

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Five State Effort

- **LSU AgCenter lead in organizing efforts to apply for NIFA Special Needs Grants for Flood Recovery**
- **Each state applied separately but we coordinated efforts**
- **All 5 states funded**
- **Monthly conference calls**

Atchison County Farmstead



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10 Promising Practices

- **EDEN Reporting System**
- **Communications and distribution of educational materials**
- **Innovative use of social media**
- **Internal Operations**
- **Triumph Over Tragedy**

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10 Promising Practices

- **Flood maps**
- **Ag/structural damage assessments**
- **Long term recovery committee formation and support (vs. unmet needs committees, COADs)**
- **Educational workshops**
- **Key partnerships**

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1 - Extension Disaster Education Network

www.eden.lsu.edu

- Collaborative multi-state effort to improve delivery of services
- Reduce impacts of disasters through education
- Supported by NIFA

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Reducing the Impact of Disasters
Through Education

Search



State Information



News and Features:

Changes that May Boost Spread of H5N1 in Humans

A research report published in Nature outlines the changes t...(more)

BSE Confirmed: Fourth Case Since 2003

Today's confirmation of bovine spongiform encephalopathy (BS...(more)

2012 Severe Weather Awareness Week

National Severe Weather Preparedness Week is April 22 to Apr...(more)

Home

Topics

Resources

EDEN Courses

News and Features

Conferences and Workshops

About EDEN

Response Notes



Response Notes



Topics in Focus

Tornado
Earthquakes
Snow and Ice
Fire (Wildfire)
Floods and Flooding
Food Safety and Defense

In the Resource Catalog

IPM and Related Information for Field Crops
Charting Your Course to Home Ownership
Ag Damage Assessment and Economic Loss
Recovery After Disaster: The Family Financial Toolkit
Preparing for a Water Emergency

Search the Catalog



Agricultural
Disasters



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2 - Communications and distribution of educational materials

- **Use of central source in each state to determine key items to distribute**
- **Local resources directory**
- **Local distribution**
- **Local disaster recovery centers**
- **Using EDEN to locate resources**



Safe rooms proved to
be lifesavers



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3 - Innovative Use of Technology

- **Using Social Media:**
 - **Facebook, Twitter, and YouTube to connect with residents**
- **Using university and extension communications departments**

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Innovative Use of Technology

- **Development of apps for tablets and smart phones**
- **Blogging**

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4 - Internal Operations

- Keeping on top of faculty/staff workload
- Using faculty/staff outside immediately affected area
- Missouri: Take Care Team
- Using Communicator, Skype, etc. for impromptu meetings
- Hotwashes/debriefs/After action reviews

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5 - Triumph Over Tragedy



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6 - Mapping

- **LSU's flood map** www.lsuagcenter.com
- **Missouri: Recovery resource mapping for FEMA**
- **Missouri: Using mapping and GIS overlay for disaster preparedness**

One Huge Scour Hole in Holt County

Courtesy of Mound City Newspaper



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7 - Ag & Structural Damage Assessments

- **Arkansas: County agents and UA ag economists worked with local officials and USDA to assess**
- **Missouri:**
 - **FAPRI ag economic impact report & workshops**
 - **Structural assessments—Joplin**

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8 - Long Term Recovery Committee Formation and Support

- **Long-term recovery committee formation and support (vs. unmet needs committees, COADs)**

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9 - Workshops Across 5 States

- **Housing**
- **Family finance**
- **Social services and farm resources**
- **Recovering flooded soils**
- **Business redevelopment (used materials from Alabama) and consultation**
- **All hazards preparedness**

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10 - Key Partnerships

- “When you are standing at the disaster is not the time to pass out your business cards.”
 - Where to start: engage with local LEPC
 - ReadyCommunities Curriculum
- Opportunity for new partners
- Discussion: What partners do you have? Are you prepared with existing relationships?

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Cooperative Extension Service

- *Most states, CES is involved in mitigation and prevention, preparation and recovery.*
- *Faculty and staff depth of engagement and roles vary.*
- *What is the depth of role in your state?
What does Extension do?*

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Other Promising Practices

Discussion:

What have you learned in your emergency preparedness and disaster recovery work, especially with large scale and multi-state disasters?

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Multi-State Issues and Barriers

- Leadership plan and follow through for continuity and communications between states
- Changes with state: organization and resources
- Workload in actual recovery process

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Multi-State Issues and Barriers

Discussion:

What are possible strategies for improving future multistate collaborations in disaster response efforts?

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Multi-State Work

Bottom line: we gained more by working together imperfectly than we would have by working alone.