



*Resilient Communities – Resilient Regions:
A Resilient Nation*

**DHS S&T
University Summit
March 20, 2008**

Project Relevance

“We have to focus on resiliency as well as preparedness – that means the community’s ability to rebound and restore critical government and business functions after a disaster occurs.

To that end we’ve provided funding to organizations like the Southeast Region Research Initiative to study and increase resiliency in our cities and other communities.

Our goal here is to make sure that if, despite the best preventative and preparedness efforts, a disaster strikes, we can get back up and running and recover as quickly as possible. And some of these efforts are now underway in Mississippi, Tennessee, and South Carolina, working to increase community resiliency through SERRI-directed research.”

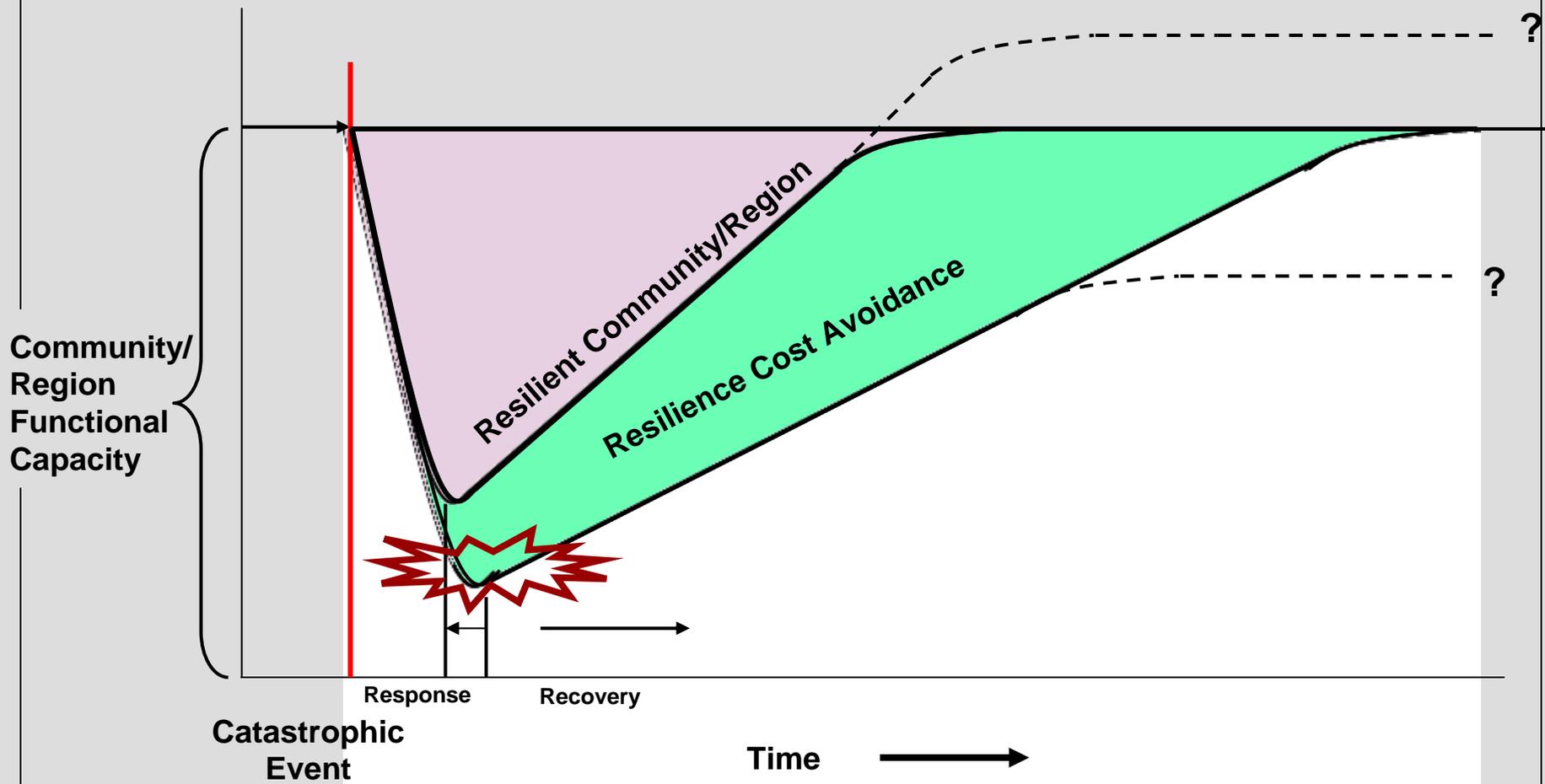
- Remarks by Homeland Security Secretary Michael Chertoff to the National Congress for Secure Communities, December 17, 2007

Our Community and Regional Resilience Initiative (CARRI) Mission

To develop the processes and tools which help communities and regions achieve their highest measurable levels of resilience to disruptions resulting from natural and man-made disasters.

Resilience: A community's or region's ability to effectively prepare for, respond to, and successfully recover from a man-made or natural disaster, by having the ability to quickly return citizens to work, reopen schools and businesses, and restore the essential services needed for a full and swift economic and social recovery.

Regional Resilience Impact...



Resilience Provides Significant Economic Benefits

A Resilient Community:

OVER THE HORIZON

Coordinated,
Regionally Available
Assets and
Resources

Emergency Response Augmentation:

- LE/Public Order
- Search and Rescue
- Mass Casualty Care
- Evacuee Support

Recovery Support:

- Emergency Financing
- Reconstruction Asset Coordination
- Public/Private Sector Integration
- Continuing Engagement

Infrastructure Restoration:

- Debris Removal
- Equipment/Materiel Stockpiles
- Trade/Technical Skilled Workers
- Emergency Housing

BUSINESS COMMUNITY

Financial Sector:

- Continuity of Service/ Access
- Recovery Financing

Plans for
Continuity/
Recovery

Retailers:

- Plans for Emergency Provision of Necessities/ Commodities

Manufacturers:

- Continuity of Operations Plans
- Corporate support coordination

Chamber of Commerce:

Informed and organized private sector

Local Authorities:

- Emergency Management Facilities and Procedures
- Disaster Response Trained and Exercised

Public Utilities:

- Materiel Stockpiles
- Continuity of Operations Plans

TRADITIONAL PILLARS

First Responders (LE, Fire, EM, etc):

- Equipped and Trained
- Interoperable Communications
- Information Sharing
- Jointly Exercised

Infrastructure:

- Built to Code
- "Hardened" to recurring concerns

Medical:

- Materiel Stockpiles
- Integrated Plans for Mass Casualties
- Patient transport and Evacuation

Academic Institutions:

- Specialized programs for:
 - Managers
 - Responders
 - NGOs/Volunteers

GRASS ROOTS RESOURCES

NGOs/Volunteers:

- Organized
- Trained
- Integrated
- Exercised

Neighborhoods:

- Organized for Evacuation
- Family Disaster Plans

Emergency Information:

- Warning information
- General information
- JIC

Public Information

Pre-event public education and outreach:

- Citizen education of hazards
- Citizen preparedness education

Schools:

- Evacuation Plans
- Facility Plans for use as Shelter/Mass Care

Establishing the Basis for a National Program

Goals

- Understand and Measure Community Resilience**
- Develop Community Resilience Processes**
- Build a Community Action Resilience Toolbox**

Research

- **Recognized Experts**
- **Interdisciplinary**
- **Scientific Basis**

Community Partners

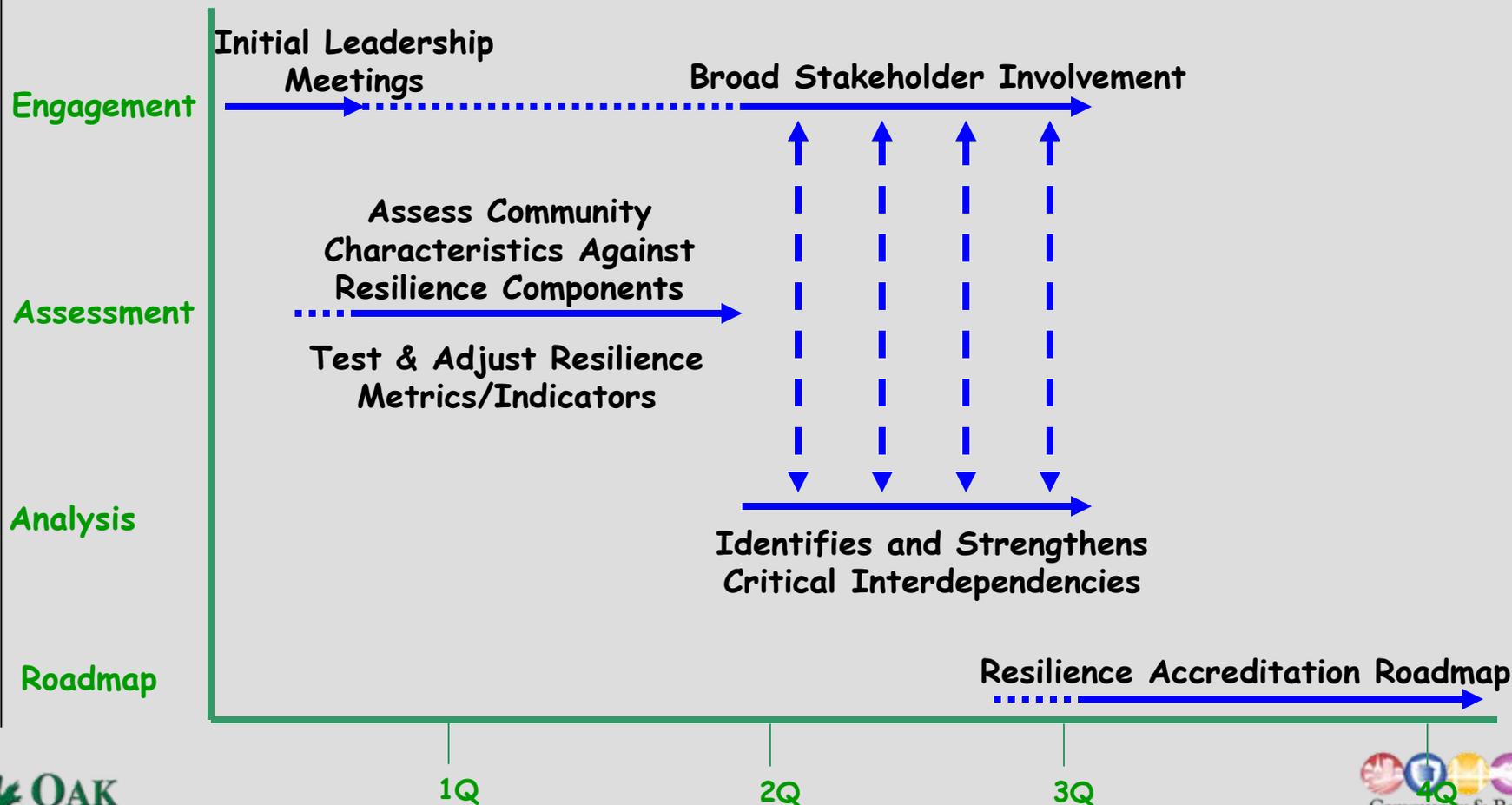
- **Real-world experience**
- **Best Practices & Lessons Learned**
- **Public and Private Sectors**

CARRI 2008 Goals

- **The state of research into community and regional resilience is known and the most significant research gaps have been identified**
- **A working definition of a resilient community has been established sufficiently to test in a pilot program and an approach to becoming a resilient community has been developed reflecting research-based knowledge**
- **Each community has identified approximately six (6) of the most important community resilience challenges and has established a plan to address each challenge**
- **Community ownership of the community resilience effort is established and leading organizations and individuals are beginning to assume responsibility for an ongoing, dynamic program**

The CARRI Process

Engagement, Assessment, Analysis, & Roadmap Development



Dimensions of Resilience

ANTICIPATE problems, opportunities, potentials for surprises

- **Integrate** economic, social, ecological, and political community domains into planning, preparedness, and response
- **Establish** critical mass of cooperative organizations to implement and evaluate local-based initiatives
- **Use** strategic planning to maximize time and energy on maximum benefit areas
- **Merge** social and economic goals

REDUCE VULNERABILITIES (related to development, socio-economic conditions, threats)

- **Build** local capacity (disaster response, economic, social)
- **Address** interdependencies, preventing cascading failures characteristic of critical infrastructure impacts
- **Build** redundancy where possible

RESPOND effectively, fairly and legitimately

- **Employ** strong and efficient systems to minimize loss of life and economic vitality
- **Mobilize** key community sectors and internal assets around priorities
- **Leverage** outset resources against goals

RECOVER rapidly, safely, and fairly

- **Focus** on areas that yield the greatest overall benefits
- **Adapt and evolve** while maintaining integrity of community character and goals

Understanding Community Resilience

Community Domains

- Governance
- Public Safety
- Public & Private Infrastructure
- Natural Resources & Land Use
- Private Sector
- Community Health
- Volunteers/NGOs

Dimensions of Resilience

- Anticipates
- Reduces Vulnerabilities
- Responds
- Recovers

Attributes

- Private Sector leads in business COOP
- Identifies and understands community's critical economic components
- Analyzes and understands critical dependencies and interdependencies
- Economic development strategies explicitly plan for recovery and restoration
- Community has access to capitol and a strategy for where and how to obtain post-incident
- Plans for public information before, during, and after incident

Understanding Community Resilience

BUSINESS COMMUNITY
Plans for Continuity/ Recovery

Public Information

OVER THE HORIZON
Coordinated, Regionally Available Assets and Resources

TRADITIONAL PILLARS

GRASS ROOTS RESOURCES

COMMUNITY FUNCTIONS	DIMENSIONS			
	Anticipates	Reduces	Responds	Recovers
Ensures safety of its citizens				
Provides health care				
Has a vibrant economy				
Ensures basic human needs (food, shelter, etc.)				
Maintains a healthy environment				
Fosters a sense of 'place'				
Open to new people & ideas (adaptability)				
Provides information; communicates effectively				
Provides education & training opportunities				
Empowers a broad range of civic organizations				

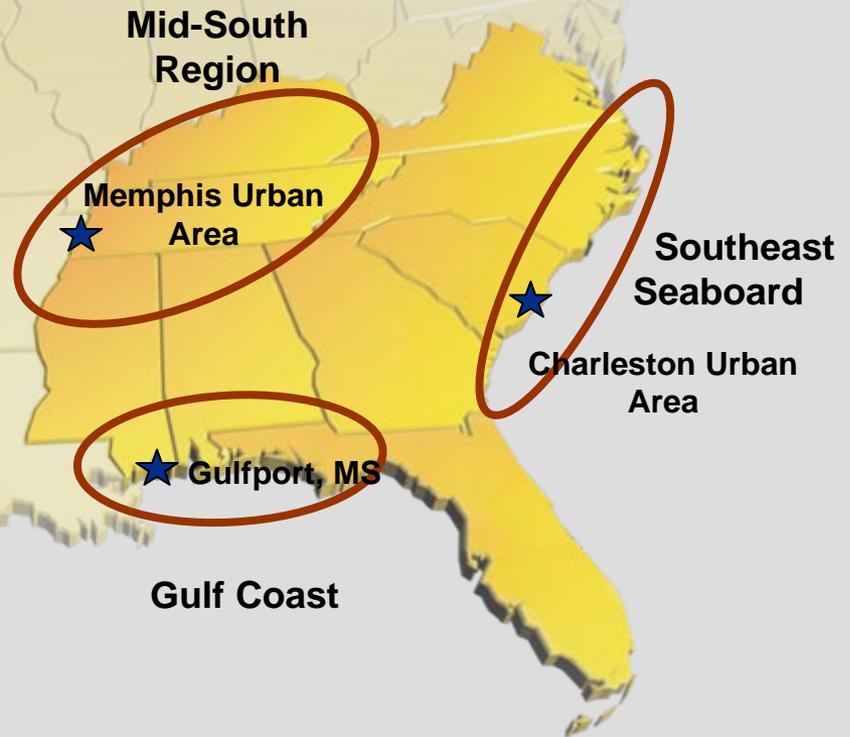
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Our Partner Communities

- Charleston, Memphis, Gulfport
- Different stages of establishing resilience
- All at risk
- Manageable mini-regions
- Economically connected
- Critical to the region

- Encouraging Cooperation
- Building Public/Private Partners
- Rationalizing Plans and Policies
- Facilitating Communications
- Establishing Trust



The CARRI Team

- **Program Director**
 - Warren Edwards -- ORNL
- **Principal Investigators & Institutions**
 - Dr. Tom Wilbanks – ORNL
- **Associate Investigators & institutions**
 - Dr. Susan Cutter: University of South Carolina
 - Dr. Lance Gunderson: Emory University
 - Dr. Susi Moser: NCAR/Clark University/Harvard University
 - Dr. Kathleen Tierney: Natural Hazards Center, University of Colorado
 - Dr. Rekha Pillai: ORNL
 - Dr. Jamison Day: University of Houston
 - Dr. Craig Colton: Louisiana State University
 - Dr. Shirley Laska: University of New Orleans
 - Dr. Yolanda Jones: Alcorn State University

The CARRI Team

- **Associate Investigators & institutions (continued)**
 - **Dr. John Plodinec: SRNL**
 - **Dr. Betty Morrow: NOAA**
 - **Dr. Robert Kates: Independent Scholar**
 - **Dr. Andy Felts: College of Charleston**
 - **Dr. Arleen Hill: University of Memphis**
 - **Dr. Tom Landsford: University of Southern Mississippi**
 - **Dr. Kristie Ebi: Independent Scholar**
 - **Dr. Mike Lesnick: Meridian Institute**
 - **Dr. Robin White: Meridian Institute**
 - **Dr. Ben Thomas: ORNL (SERRI)**
 - **Ms Ann Farrar: ORNL**
 - **Ms Ann Olsen: Meridian Institute**
 - **Ms Sarah Walen: Meridian Institute**

CARRI Current Collaborations

DHS

- S&T Human Factors
 - OIP
- Private Sector Office
- Office of Health Affairs
- Faith Based and Community Initiatives
- Office of Civil Rights and Civil Liberties

FEMA

- Citizen Corps
- Private Sector Office
- ESF #14 National Coordinator
- Donations/Volunteer Management
- Regional and Disaster Support
- FEMA Region 4

Other Government Organizations

- NOAA – Coastal Services Center
 - The Federal Reserve Board
 - US Coast Guard
- US Northern Command (DOD)
 - DOE

Other Resilience Groups

- The Infrastructure Security Partnership (TISP)
- Pacific Northwest Economic Region

The CARRI Network

The Private Sector

- **Memphis Gas Light & Water**
- **Cisco Systems**
- **Wal-Mart**
- **Iron Mountain**
- **VACO Mid-South**
- **Kroger**
- **Nike**
- **Enterra Solutions**
- **Valero Refinery**
- **Time Warner Telecom**
- **St Jude's Children's Hospital**
- **First Horizon**
- **Target**
- **JC Penney**
- **Mississippi Power**
- **Mitre Corporation**
- **Baptist Memorial Healthcare**
- **Autozone**
- **FedEX**
- **Cummins**
- **Supervalu**
- **Verizon**
- **Northrop Grumman**
- **Mitigation Services**
- **Beck Disaster Recovery**
- **Monarch Business Resiliency**
- **Island View Resort and Casino**
- **Siemens**
- **Powers Hill Design**
- **Securitas**
- **Boyle Investments**
- **Battelle**
- **Bank of America**
- **Chevron**
- **Mapco Express**
- **Flour Corporation**
- **Home Depot**
- **Safeway**
- **Publix**
- **International Paper**
- **IT&T**
- **Black and Decker**
- **Simon Properties**
- **Lockheed Martin**
- **AIG**
- **Medtronic**
- **Schering-Plough Global Supply Chain**
- **Applied Robotic Services**

The CARRI Network

Associations

- National Milk Producers Federation
- United Way
- Mississippi Coast Interfaith Disaster Task Force
- South Carolina Sea Grant Consortium
- Mississippi Low Income Child Care Initiative
- International Dairy Foods Association
- Association of Insurance and Reinsurance
- Save the Children
- National Association of Counties
- National Chamber of Commerce
- International City/County Managers Association
- Charleston Metro Chamber of Commerce
- Humane Society of South Mississippi
- Business Executives for National Defense
- Charleston Regional Development Alliance
- American Bus Association
- National Governor's Association
- Salvation Army
- John S. and James L. Knight Foundation
- EDC/HOPE
- Plough Foundation
- South Carolina Association of Community Development Corporations
- Alfred P. Sloan Foundation
- Boys and Girls Clubs of the Gulf Coast
- Bay Area Food Bank
- Memphis First
- Feed My Sheep
- National Retail Federation
- Manufacturing Extension Partnerships
- American Trucking Association
- National Voluntary Organizations Active in Disaster (VOAD)
- Sierra Club
- The Hyde Family Foundation
- Latino Memphis
- Land Trust for the Coastal Plain
- The John H. Heinz Center
- North Carolina Baptist Men
- Association of Contingency Planners
- Association of American Railroads
- Gulf Coast Community Foundation
- American Red Cross
- Woodrow Wilson International Center
- Gulf Coast Renaissance Corporation
- Charleston Regional Development Alliance
- Gulf Coast Business Council
- Steps Coalition
- Assisi Foundation
- Mississippi Center for Justice
- Memphis Regional Chamber of Commerce
- Share One, Inc.
- Barlett Chamber of Commerce
- Lauderdale Chamber of Commerce

The CARRI Network

Localities

- **City of Memphis, Tennessee**
- **Shelby County, Tennessee**
- **City of Bartlett, Mississippi**
- **City of Germantown, South Carolina**
- **City of Gulfport, Mississippi**
- **Charleston County, South Carolina**
- **City of Charleston, South Carolina**
- **City of Lakeland, Tennessee**
- **DeSoto County, Mississippi**
- **Town of Mount Pleasant, South Carolina**
- **Fayette County, Tennessee**
- **Dorchester County, South Carolina**
- **Harrison County, Mississippi**
- **City of Biloxi, Mississippi**
- **City of North Charleston, South Carolina**
- **Lauderdale County, Tennessee**
- **Town of Collierville, Tennessee**
- **Town of Arlington, Tennessee**
- **Covington/Tipton County, Tennessee**
- **Crittenden County, Arkansas**

“Normally it is left up to us first responders to put Humpty Dumpty back together again. We can only do so much; it has to be a community effort, both government and the private sector.

We didn't build our cities by government alone, and when something BIG happens, government will never be able to do it alone.”

**Fire Chief Pat Sullivan
Gulfport, MS**



Source: Josh Norman, Episcopal Relief and Development, www.er-d.org



Source: www.mississippicasinos.com