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DISASTER RESISTANT UNIVERSITY WORKSHOP 2013 LINKING MITIGATION AND RESILIENCE

MARCH 20-22, 2013

Lindy C. Boggs International Conference Center at The University of New Orleans 2045 Lakeshore Drive, New Orleans, Louisiana 70122

PROGRAM











Welcome From the President

I am happy to welcome you to New Orleans and the University of New Orleans, which is a major urban research university located in one of the world's most exciting and culturally diverse cities. New Orleans is, indeed, one of the world's most fascinating cities, with historical influences from Europe, the Caribbean, Africa, and beyond. It is home to a truly unique melting pot of culture, food and music. The University of New Orleans is a microcosm of the City of New Orleans. Our campus is the most diverse in Louisiana, with students from every state in the nation and from ninety different countries.

The University of New Orleans offers several programs of distinction, including the internationally renowned Jazz Studies program and Naval Architecture and Marine Engineering. Our Hotel, Restaurant, and Tourism Administration program is among the best in the world. New Orleans has become *Hollywood South* and our Film program is ranked among the top programs in the nation. We have a long tradition of offering quality, affordable academic programs.

Although the effects of Hurricane Katrina are still being felt throughout the Greater New Orleans, the opportunities that have resulted for the University of New Orleans and its partners have been beneficial. The University of New Orleans offers students and faculty a living laboratory and a unique opportunity to participate in the full recovery of New Orleans and the River Region. The University of New Orleans continues to work closely with the leaders of our city and state in rebuilding a major, international city.

As a comprehensive university, the University of New Orleans has traditional programs in the arts and sciences, as well as professional schools in engineering, education, and business. Our academic programs in urban planning, engineering, and environmental sciences pay a key role in strengthening our region's infrastructures and restoring our wetlands.

The University of New Orleans has an important role in educating and serving New Orleans and the region. We are the University *for* New Orleans. We provide essential support for the educational, economic, cultural, and social well-being of the communities we serve. We are *The Heartbeat of the Crescent City*.

Peter J. Fos President

Day 1, Wednesday, March 20

8:00am-9:00am	Registration/Continental Breakfast
9:00am-10:00am	Welcome/Opening Remarks/Self-Introductions // Room 236
10:00am-10:45am	Keynote Address—DRU: Building Networks, Partnerships and Resources // Room 236
10:45am-11:00am	Morning Break
11:00am-12:00pm WORKSHOP SESSION I (three concurrent sessions)	Defining Safety for Universities: The Slippery Conceptual Slope // Room 256
	Mitigation Planning 101 // Room 250 Building Campus Resilience: Pre-Disaster Mitigation & Preparedness // Room 257
12:00pm-1:30pm	Lunch—Campus Roles in Emergency Management // Room 236
1:30pm-3:00pm WORKSHOP SESSION II (four concurrent sessions)	Critical Infrastructure and Resilience // Room 250 ◆ Aligning Your IT Requirements with Resilient Resources
	Roundtable Discussion // Room 256 ◆ The Challenge of University Resilience: Practicing What We Preach & How Faculty & Staff Can Make a Difference
	 Mixed Session // Room 205 ◆ The Next Step—Beyond Disaster Resistance to Resilience ◆ How Emergency Planning Standards Can Help You Do Your Job
	 Mixed Session // Room 257 ◆ Managing Risk in a Changing Climate ◆ Transportation Safety and Access: A Case Study of the St. Claude Bridge in New Orleans
3:00pm-3:30pm	Afternoon Break
3:30pm-5:00pm WORKSHOP SESSION III (four concurrent sessions)	 Multi-Campus Planning // Room 256 ♦ Creating a Multi-Campus Hazard Mitigation Plan for the Mississippi Gulf Coast Community College System ♦ Strategies for Smaller Campuses: Lessons on Campus Planning from a Higher Education Consortium
	 Building Assessment Strategies and Planning // Room 257 ♦ Ensuring the Safety of our Institutions of Higher Learning ♦ Field Planning and Data Collection Practices for Conducting Detailed Natural Hazard Vulnerability Assessments of Campus Structures
	 Examining University Preparedness // Room 205 ♦ Situated Preparedness: The Negotiation of a Future Catastrophe in a California University ♦ Disaster Resistance at Two Canadian Universities: Case Studies of the University of Waterloo and Wilfrid Laurier University
	The University of New Orleans—Post Katrina // Room 250 ◆ The University as a Resilient Community: Applying Lessons Learned from Katrina ◆ Preparation for the Storm: Evacuating Students Prior to a Hurricane
5:00pm-6:30pm	Jazz Reception
	Music provided by UNO's Department of Music

WORKSHOP AT A GLANCE

Day 2, Thursday, March 21

8:00am-9:00am	Registration/Continental Breakfast
9:00am-9:45am	Welcome/Opening Remarks // Room 236
9:45am-10:30am	Keynote Address—Linking Mitigation & Resilience // Room 236
10:30am-10:45am	Morning Break
10:45am-11:45am WORKSHOP SESSION I (three concurrent sessions)	Benefit Cost Analysis // Room 250
	Time: The Fourth Dimension of Hazard Mitigation Planning // Room 256
	Emergency Planning for Child Care: Protecting the Youngest on Your Campus // Room 257
12:00pm-1:30pm	Lunch—U.S. National Weather Service Weather Ready Nation Initiative // Room 236
1:30pm-3:00pm WORKSHOP SESSION II (four concurrent sessions)	Community Based Recovery Planning—The Role of a University // Room 256 ◆ Hoffman Triangle Neighborhood Planning from the Inside Out ◆ The Role of Universities in Post-Disaster Community-Based Planning after Great East Japan Earthquake
	 HAZUS & Other Planning Tools // Room 250 ◆ Advancing Disaster Resistant University Planning Beyond the Basic Requirements ◆ A Unique Collaborative Process for Developing a DRU
	 Successful Communication Practices // Room 257 ◆ Addressing the Common Challenge: Communication Turning "Can you Hear me Now?" into "Do you Understand What I am Saying?" ◆ Social Media in Emergency Management: Strategies, Use Cases, and Tools
	 Healthcare & Planning // Room 205 ◆ Gender-Aware Disaster Care: Simple Interventions That Can Reduce Impact, Suffering, and Post-Disaster Emergency Healthcare Costs ◆ Mitigation for University Health Systems and Transfer Trauma: Hurricane Sandy as a Case Study
3:00pm-3:30pm	Afternoon Break
3:30pm-5:00pm WORKSHOP SESSION III (three concurrent sessions)	Funding—Pre and Post Disaster // Room 256 ◆ Navigating Post-Disaster Repair and Reconstruction ◆ Non-Disaster Grant Funding
	Planning Case Studies // Room 250 ◆ Natural Hazard Mitigation Plan Update for the University of Mississippi ◆ Stormwater Management at the University of New Orleans
	 The University Setting // Room 257 ◆ Building the University—Community Partnership in Disaster Management ◆ Building a More Resilient University Campus: Lessons Learned from Six Emergency Management Service Learning Projects

Day 3, Friday, March 22

8:00am-9:00am	Registration/Continental Breakfast
9:00am-10:00am	Welcome/Keynote Address— <i>Per Aspera Ad Astra</i> : Foreseeable Natural Hazards-A Safer Future for Universities [and Colleges] Founded on Ethics, Sustainability, Good Business and the Law // Room 236
10:00am-10:45am	Keynote Address—The Role of Safe Rooms in Disaster Resistant Universities // Room 236
11:00am-12:00pm WORKSHOP SESSION I (three concurrent sessions)	What about Collections? Mitigation Best Practices for University Collections to Ensure Resilience // Room 256
	Continuity Planning at Institutions of Higher Education // Room 257
	The 9-Steps to Disaster Recovery: How to Become Better Prepared for the Next Event// Room 250
12:00pm-1:30pm	Lunch // Room 236
1:00pm-3:00pm TRAINING	Community College FEMA Citizen Preparedness Training Initiative—2 HOUR SESSION—certification of those who attend // Room 256
1:30pm-3:00pm WORKSHOP SESSION II (two concurrent sessions)	 University Education & Outreach—Building Resilient Communities // Room 250 ◆ Critical Need for Improved Construction Standards for Disaster Resilient Homes ◆ A Resilience Success Story: How Significant Losses were avoided during Hurricane Isaac
	The Decision-Making Process—Interactive Session // Room 257 ◆ Crisis Gaming as an Element of Risk Mitigation and Organizational Resilience: A Case Study of the University of California, San Diego

WORKSHOP AT A GLANC

Mark Riley

Mr. Riley serves as the Deputy Director for Disaster Recovery. He came to GOHSEP in June 2007 and served as the Assistant Deputy Director, Disaster Recovery. Mr. Riley is responsible for all recovery activities related to the Public Assistance and Hazard Mitigation programs authorized by the Robert T. Stafford Disaster Relief and Emergency Response Act. Mr. Riley was designated the Deputy Governor's Authorized Representative for Hurricanes Katrina and Rita, and the State Coordinating Officer for Hurricanes Gustav and Ike.



Prior to accepting the position with GOHSEP, Mr. Riley was the Legal Advisor to the Joint Warfighting Center, U.S. Joint Forces Command, in Norfolk, Virginia. Mr. Riley is a long time, off and on, resident of Baton Rouge dating back to his graduation from Louisiana State University in 1974.

Mr. Riley retired from the U.S. Marine Corps Reserves in 2007 after 32 years of reserve and active service. Prior to his latest recall to active duty, Mr. Riley was the Assistant Executive Director of the Louisiana Office of Student Financial Assistance (OSFA). Mr. Riley has served as the President and Chief Executive Officer of Phoenix Environmental Services, Inc., the Vice President and General Counsel of GDC Engineering, Inc., and was in private practice with the law firm of Taylor, Porter Brooks and Phillips, in Baton Rouge, for approximately ten years, focusing his practice on tax and business law issues.

Amy Banks

Dr. Amy Banks currently serves as a Management and Program Analyst for the U.S. Department of Education's (ED) Office of Safe and Healthy Students which administers, coordinates, and recommends policy for improving the quality of programs and activities to promote the health and well-being of students in elementary schools, secondary schools, and institutions of higher education. Specifically, Dr. Banks works in OSHS' Center for School Preparedness, which administers programs that promote the ability of education facilities to prepare for and respond to all hazards, natural and man-made.



In relation to Homeland Security, Dr. Banks serves as the lead for the Education Facilities Subsector (EFS) under the National Infrastructure Protection Plan (NIPP). In this role, she works to address infrastructure protection and resilience activities, including impact and damage reporting for all U.S. education facilities; addresses comprehensive emergency management for education facilities; and assists in fostering and supporting Federal and private sector partnerships, information sharing and data collection, participation in national exercises, and various activities as they relate to protective efforts and planning.

Amy has a Bachelor of Arts degree in Child Psychology from the University of Minnesota-Minneapolis, and a doctorate from Howard University in Developmental Psychology.

Andre Le Duc

Andre Le Duc is Executive Director of Enterprise Risk Services at the University of Oregon. His professional and applied research is focused on the development of community and organizational resilience. Le Duc has a proven history of working successfully with executive leadership, emergency services and risk management professionals, academics, and private-sector representatives on diverse and complex hazard and risk-related projects and policy issues. He is the founding director of the UO Emergency Management & Continuity Program.



Prior to working as a senior administrator for the university, Le Duc served as the founding director of the Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon's Community Service Center. OPDR is an applied research center and coalition of public, private, and professional organizations working collectively toward the mission of creating a disaster resilient and sustainable state.

He also established and manages the national Disaster Resilience Universities (DRU) Listserv, which has over 900 members covering an estimated 750 higher education institutions. Le Duc is the current Chair of the International Association of Emergency Managers -- University & College Caucus and serves on a number of regional and national boards focused on emergency management, preparedness and disaster resilience.

Frances L. Edwards

Frances L. Edwards, MUP, PhD, CEM, is the director of the Master of Public Administration program and professor of political science at San Jose State University. She is deputy director of the National Transportation Security Center of the Mineta Transportation Institute at SJSU, where she is also a research associate and teaches emergency management in the Master of Science in Transportation Management program. She has written nine research monographs available at the Mineta Transportation Institute website. Her most recent book is *Introduction to Transportation Security* with Dan Goodrich.



Her current research is focused on the continuity of operations process and its relationship to emergency management in: transportation organizations; climate change and transportation; and transportation security. She was an emergency management professional in California for twenty years before joining the university, with honors including the Public Administrator of the Year award from *Governing Magazine* in 2002 for her work in terrorism response.

Jeffrey A. Giering

Mr. Giering serves as the State Hazard Mitigation Officer, Disaster Recovery Division. He was placed in this position in December of 2011 and provides technical assistance to the Deputy Director of Recovery as well as the Director of GOHSEP. Additionally, Jeffrey is in charge of GOHSEP's mitigation field staff, State Applicant Liaisons (SAL's). This highly technical section provides continued education and outreach to potential subgrantees, focusing on application development. He also oversees the implementation of all FEMA mitigation grant programs in Louisiana.

Prior to this role, Jeffrey has served as Section Chief, as well as the Assistant Section Chief, Supervisory Grants Administrator and Environmental Officer. He has also served as GOHSEP's Environmental Officer on FEMA Disasters 1435, 1437, 3172, 1521, 1548, 1603, 1607 and 1668.

Mr. Giering is a member of Louisiana's Army National Guard and has proudly served for 10 years. He currently holds the rank of Captain and serves in the Operations Section of the 769th Engineer Battalion. From July 2007 to August 2008, Jeffrey was mobilized and deployed to Baghdad Iraq, in support of Operation Iraqi Freedom.

Mr. Giering is a graduate of Northwestern State University, with a Bachelor's of Science in Biology, with minors in History, and Soil Science. He is a Certified Floodplain Manager and a certified Louisiana Emergency Manager.

Frank Pagano

Frank Pagano has dedicated 33 years of service to the federal government and currently serves as Mitigation Division Director for FEMA Region 6. In this position, Mr. Pagano provides executive leadership and oversight of the Mitigation Division including day-to-day management of Division staff and programs delivered through the Risk Analysis (RA) Branch, the Hazard Mitigation Assistance (HMA) Branch, and the Floodplain Management and Insurance (FMI) Branch. He is also responsible for Environmental oversight of



all Regional grant and disaster operations. Mr. Pagano serves as liaison to State and local officials for long-term recovery efforts, comprehensive community mitigation planning, and implementation of the national Risk Map effort and provides support for long-term community recovery and sustainability.

Mr. Pagano is a Certified Property Loss Adjuster and a Certified Real Estate Appraiser and has earned degrees from the University of Buffalo, Bryan and Stratton Business Institute, Hartford School of Insurance, and Erie Community College.

Erin Capps

Erin Capps is a licensed attorney with expertise in Stafford Act compliance and interpreting the 44 Code of Federal Regulations. As Vice President of Operations at H2O Partners Inc., Erin oversees the development of FEMA Hazard Mitigation Assistance (HMA) plans and grants as well as Public Assistance (PA) recovery efforts and helps develop and manage Community Development Block Grants.

She has worked closely with cities, counties, regional groups, non-profits, states, and federal agencies with planning and recovery efforts to help build resilient communities. Her legal background and broad experience has helped shape her understanding of compliance statutes and how they can be leveraged to maximize funding for various entities.

As the Co-Chair of the Hazard Mitigation Planning Committee for the Natural Hazard Mitigation Association (NHMA), Ms. Capps has created conference panels on the challenges of making mitigation matter and co-authored a white paper on how to improve mitigation planning. She has also conducted outreach and presentations for state and national groups on a variety of topics, including: No Adverse Impact, legal and policy issues surrounding floodplain management, higher standards for floodplain management, source water quality and protection, and FEMA assistance programs.

Ms. Capps holds a Juris Doctor from Baylor University School of Law and a Bachelor of Science degree in Advertising with a specialization in business from the University of Texas at Austin.

Ernst W. Kiesling

Dr. Kiesling has spent most of his career administering engineering education and research programs at Texas Tech University, twenty years as Chairman of the Civil Engineering Department during which time the wind science and engineering research program was formed and the concept of the above-ground storm shelter emerged. Some have referred to Dr. Kiesling as the "Father of the Safe Room." He was awarded the FLASH Leadership Award at Disney's Epcot Center in 2009.



Dr. Kiesling directs the storm shelter program for the Wind Science and Engineering Research Center at Texas Tech, including the debris impact test facility. He was instrumental in founding the National Storm Shelter Association (NSSA) in 2000 and has served as Executive Director since 2001.

He is a member of the International Code Council (ICC) committee that developed the ICC-500, the only national consensus Safe Room Standard. He is completing a Hazard Mitigation Grant to develop web-based instructional programs on storm shelter quality.

8:00am-9:00am	Registration/Continental Breakfast
9:00am-10:00am	Welcome/Opening Remarks/Self-Introductions // Room 236 Monica Farris, Director, UNO-CHART Peter Fos, President, The University of New Orleans Mark Riley, GOHSEP
10:00am-10:45am	Keynote Address—DRU: Building Networks, Partnerships, and Resources // Room 236 Amy Banks, U.S. Department of Education Andre Le Duc, University of Oregon, & Universities and Colleges Caucus (UCC) of IAEM
10:45am-11:00am	Morning Break
11:00am-12:00pm	WORKSHOP SESSION I (three concurrent workshop sessions)
	Defining Safety for Universities: The Slippery Conceptual Slope // Room 256 Pam Jenkins, The University of New Orleans
	Mitigation Planning 101 // Room 250 Nicolette English, GOHSEP
	Building Campus Resilience: Pre-Disaster Mitigation & Preparedness // Room 257 Kay C. Goss, CEM, World Disaster Management
12:00pm-1:30pm	Lunch
	C

Campus Roles in Emergency Management // Room 236

Frannie Edwards, Mineta Transportation Institute, San Jose State University

1:30pm-3:00pm

WORKSHOP SESSION II

(four concurrent workshop sessions)

Critical Infrastructure and Resilience // Room 250

Aligning your IT Requirements with Resilient Resources
Ken D'Aquin, The University of New Orleans

Roundtable Discussion // Room 256

The Challenge of University Resilience: Practicing What We Preach & How Faculty & Staff Can Make a Difference

Stacey Mann, Jacksonville State University; Oluponmile Olonilua, Texas Southern University; Jeff Van Slyke, Jacksonville State University; Sgt. Ryan M. Chesley, Berry College Police Department; Lt. David Abels, Louisiana State University; Kelly Osterbind, University of South Alabama

1:30pm-3:00pm

Mixed Session // Room 205

The Next Step-Beyond Disaster Resistance to Resilience
M J Plodinec, Community and Regional Resilience Institute
How Emergency Planning Standards Can Help You Do Your Job
Troy Harris, Westmont College

Mixed Session // Room 257

Managing Risk in a Changing Climate

Anna Schwab, Center for the Study of Natural Hazards and Disasters, The University of North Carolina at Chapel Hill *Transportation Safety and Access: A Case Study of the St. Claude Bridge in New Orleans*Earthea Nance, The University of New Orleans

3:00pm-3:30pm

Afternoon Break

3:30pm-5:00pm

WORKSHOP SESSION III

(four concurrent workshop sessions)

Multi-Campus Planning // Room 256

Creating a Multi-Campus Hazard Mitigation Plan for the Mississippi Gulf Coast Community College System

Caroline Cunningham and Nathan Slaughter, Atkins North America; John Shows, Mississippi Gulf Coast Community College

Strategies for Smaller Campuses: Lessons on Campus Planning from a Higher Education Consortium
Rebekah Green, Resilience Institute

Building Assessment Strategies & Planning // Room 257

Ensuring the Safety of our Institutions of Higher Learning

Deborah Mills and Jane Sibley Frantz, Dewberry Consultants LLC

Field Planning and Data Collection Practices for Conducting Detailed Natural Hazard Vulnerability
Assessments of Campus Structures

Shandy Ogea and Carol Friedland, Louisiana State University

Examining University Preparedness // Room 205

Situated Preparedness: The Negotiation of a Future Catastrophe in a California University
Natalie Baker, University of California

Disaster Resistance at Two Canadian Universities: Case Studies of the University of Waterloo and Wilfrid Laurier University

Catherine Brown, Waterloo University

The University of New Orleans—Post Katrina // Room 250

The University as a Resilient Community: Applying Lessons Learned from Katrina

John Kiefer, The University of New Orleans

Preparation for the Storm: Evacuating Students Prior to a Hurricane

Pam Rault, The University of New Orleans

5:00pm-6:30pm

Jazz Reception

Music provided by UNO's Department of Music

8:00am-9:00am	Registration/Continental Breakfast
9:00am-9:45am	Welcome/Opening Remarks // Room 236
	Monica Farris, Director, UNO-CHART
	Susan Krantz, Dean, College of Liberal Arts, The University of New Orleans
	Jeffrey Giering, GOHSEP
9:45am-10:30am	Keynote Address—Linking Mitigation & Resilience // Room 236
	Frank Pagano, DHS-FEMA
10:30am-10:45am	Morning Break
10:45am-11:45am	WORKSHOP SESSION I
	(three concurrent workshop sessions)
	Benefit Cost Analysis // Room 250
	Joe Johnson, GOHSEP
	Time: The Fourth Dimension of Hazard Mitigation Planning // Room 256
	Pat Skinner and Maurice Walcott, LSU AgCenter; Joshua Kent, LSU Center for Geoinformatics
	Emergency Planning for Child Care: Protecting the Youngest on Your Campus // Room 257
	Alessandra Jerolleman, LLC, NHMA
12:00pm-1:30pm	Lunch
	U.S. National Weather Service Weather Ready Nation Initiative // Room 236
	Jim Salzwedel, National Weather Service
1:30pm-3:00pm	WORKSHOP SESSION II
1.50րш-5.00րш	WORKSHOT SESSION II

(four concurrent workshop sessions)

Community Based Recovery Planning—The Role of a University // Room 256

Hoffman Triangle Neighborhood Planning from the Inside Out
Michelle M. Thompson, UNO-PLUS; Brittany N. Arceneaux, WhoData.org
The Role of Universities in Post-Disaster Community-Based Recovery Planning after
Great East Japan Earthquake
Tamiyo Kondo, Kobe University

HAZUS & Other Planning Tools // Room 250

Advancing Disaster Resistant University Planning Beyond the Basic Requirements

Melanie Gall, Louisiana State University

A Unique Collaborative Process for Developing a DRU

John Buechler and Laura Danielson, The Polis Center

1:30pm-3:00pm

Successful Communication Practices // Room 257

Addressing the Common Challenge: Communication Turning "Can you Hear me Now?" into "Do you Understand What I am Saying?"

Will Moorhead and Ginny Schwartzer, All Clear Emergency Management Group

Social Media in Emergency Management: Strategies, Use Cases, and Tools

Emma Stocker, University of Oregon

Healthcare & Planning // Room 205

Gender-Aware Disaster Care: Simple Interventions That Can Reduce Impact, Suffering, and Post-Disaster Emergency Healthcare Costs

Roxane Richter, World Missions Possible

Mitigation for University Health Systems and Transfer Trauma: Hurricane Sandy as a Case Study

Dana Greene, University of North Carolina, Chapel Hill

3:00pm-3:30pm

Afternoon Break

3:30pm-5:00pm

WORKSHOP SESSION III

(three concurrent workshop sessions)

Funding—Pre and Post Disaster // Room 256

Navigating Post-Disaster Repair and Reconstruction
Peter Drenan, Dewberry; Ruth Lovelace, University of Mary Washington
Non-Disaster Grant Funding
Kim Ryals, GOHSEP

Planning Case Studies // Room 250

Natural Hazard Mitigation Plan Update for the University of Mississippi Mamun Miah, Kyle Bethay and C. Mullen, University of Mississippi Stormwater Management at The University of New Orleans Nandini Seth and Mariana Marmol, The University of New Orleans

The University Setting // Room 257

Building the University-Community Partnership in Disaster Management

Bennetta Robinson, Jackson State University Coastal Hazards Center of Excellence; Rachel Dowty Beech,

Louisiana State University

Building a More Resilient University Campus: Lessons Learned from Six Emergency Management Service Learning Projects

Claire Connolly Knox, University of Central Florida

8:00am-9:00am

Registration/Continental Breakfast

9:00am-10:00am

Welcome // Room 236

Monica Farris, Director, UNO-CHART

Keynote Address—Per Aspera Astra: Forseeable Natural Hazards—A Safer Future for Universities [and Colleges] Founded on Ethics, Sustainability, Good Business and the Law

Erin Capps, H2O Partners, NHMA

10:00am-10:45am

Keynote Address—The Role of Safe Rooms in Disaster Resistant Universities // Room 236

Ernst W. Kiesling, Texas Tech University

11:00am-12:00pm

WORKSHOP SESSION I

(three concurrent workshop sessions)

What about Collections? Mitigation Best Practices for University Collections to Ensure Resilience // Room 256

Pat Young, University of Delaware

Continuity Planning at Institutions of Higher Education // Room 257

Matthew Hart, Tufts University

The 9-Steps to Disaster Recovery: How to Become Better Prepared for the Next Event // Room 250

Alessandra Jerolleman, LLC, NHMA

12:00pm-1:30pm

Lunch // Room 236

1:00pm-3:00pm

Community College FEMA Citizen Preparedness Training Initiative // Room 256

2 HOUR SESSION—certification of those who attend

John J. Perrone, Jr., Monroe Community College

1:30pm-3:00pm

WORKSHOP SESSION II

(two concurrent workshop sessions)

University Education & Outreach—Building Resilient Communities // Room 250

Critical Need for Improved Construction Standards for Disaster Resilient Homes Vijaya (VJ) Gopu, The University of New Orleans

A Resilience Success Story: How Significant Losses were Avoided during Hurricane Isaac // Room 250

John E. Bourdeau, FEMA

1:30pm-3:00pm

The Decision-Making Process (Interactive Session) // Room 257

Crisis Gaming as an Element of Risk Mitigation and Organizational Resilience: A Case Study of The University of California, San Diego

Philip Van Saun, University of California, San Diego

Natalie D. Baker, University of California, Irvine

Situated Preparedness: The Negotiation of a Future Catastrophe in a California University

I examine preparedness efforts engaged at a large university in southern California vulnerable to a potentially catastrophic earthquake. I address how students and staff in this context enact preparedness using inductive research methods. Data collection efforts consisted of in-depth interviews, archival analysis of disaster planning materials, and observation of preparedness activities. For the workshop and related to its theme of disaster resilience, I will present official and unofficial conceptions of disaster preparedness as visions of potential responses. The official version of preparedness as it is currently practiced is a top-down approach where staff utilizes a combination of plans and educational materials in the hopes of educating and facilitating successful responses within the university community. In contrast, students, as representatives of the vulnerable public, relate minimal knowledge of both the risks of an earthquake and of organizational efforts and expectations, however, still relate the potential for successful response despite a lack of preparedness efforts. The source of the disconnection between the two groups is an expectation of personal responsibility and compliance in disaster preparedness when response is largely a situational and collective effort. I reconceptualize the disaster-risk community as a Community of Practice and outline a way to facilitate preparedness-engaged processes for both sets of actors, acknowledging both groups as experts of their own context. I pose an alternative vision of disaster preparedness as a situated, collaborative effort, designed to share and capitalize on aspects of the 'endemic' resilience of both sets of actors and bridge inherent disconnections between them.

Amy Banks, U.S. Department of Education Andre Le Duc, University of Oregon & Universities & Colleges Caucus (UCC) of IAEM

DRU: Building Networks, Partnerships, and Resources

Please contact Amy Banks: amy.banks@ed.gov, or Andre Le Duc: leduc@uoregon.edu, for more information.

John E. Bourdeau, FEMA

A Resilience Success Story: How Significant Losses were avoided during Hurricane Isaac

Over the past seven years, following the extensive damage and loss of life from Hurricane Katrina (2005), the Federal Government, other Federal partners, the State of Louisiana and its citizens, have invested millions of dollars in Hazard Mitigation measures to protect individuals and property from the effects of future hazards and disasters. The high winds and flood damage that resulted from Hurricane Isaac (2012), provided an opportunity for FEMA HPA specialists to evaluate and analyze the performance of 95 residential structures that had been elevated post Katrina. This study provides a resilience success story as hard data was captured to validate significant losses avoided resulting from elevating homes above the Base Flood Elevation (BFE).

Catherine Brown, University of Waterloo Brent Doberstein, University of Waterloo

Disaster Resistance at Two Canadian Universities: Case Studies of the University of Waterloo and Wilfrid Laurier University

Since its emergence in 2000, the Disaster Resistant Universities (DRU) concept has been influential in assisting universities understand and prepare for the risks of natural and man-made disasters. Although mostly an American initiative to date, most of the details of the concept are applicable beyond American borders. In recent years, a number of Canadian universities have been re-evaluating their disaster preparedness and management plans, in part due to greater awareness of the need for disaster preparation brought on by the DRU concept.

This research examines the state of disaster preparedness in two Canadian universities: the University of Waterloo (UW) and Wilfred Laurier University (WLU), using the DRU concept as a method of evaluation. Both universities are important research centers, and combined, have a student population of approximately 55,000. They are located in the southern Ontario city of Waterloo approximately one kilometre apart. Because of the geographic location of these institutions, the most likely natural hazards are winter blizzards, severe summer storms (lighting, high winds, hail and tornados), floods and disease outbreaks. Possible human-caused disasters include fire, transportation accidents, structural collapse and violence/disturbances.

For this study, the researchers designed and applied a DRU best practices evaluation framework to the disaster management plans of both case study Universities. The framework was developed by consulting key DRU documents, the disaster management plan of the Region of Waterloo, and other academic/applied sources. The research was initiated in September 2012, and will conclude in February 2013 so final results are not yet available, however, preliminary results suggest that hazard preparedness has been focused on winter disasters and disease outbreaks (e.g. influenza) at both universities, with limited attention allotted to the assessment and implementation of a plan to mitigate the impacts of remaining potential hazards. Recommendations will be provided to assist the universities in developing a more comprehensive disaster management document based on the evaluation framework.

John Buechler, The Polis Center **Laura Danielson,** The Polis Center

A Unique Collaborative Process for Developing a DRU

Indiana University (IU) has eight campuses around the state of Indiana, including two core campuses and six regional campuses, with a total student population of approximately 110,500. In early 2012, IU partnered with The Polis Center—an academic research center out of the core Indianapolis campus—to develop a comprehensive Disaster Resistant University Risk Assessment and Mitigation Plan to cover all eight campuses. The Polis Center has developed more than 100 county hazard mitigation plans and has significant expertise in FEMA's Hazus-MH, a GIS-based disaster mitigation tool, as well as other geographic information systems.

In this presentation, The Polis Center will discuss the processes of incorporating each campus's unique data into databases that support Hazus-MH and other GIS hazard modeling applications. These resulting hazard scenarios estimate the physical, economic, and social impacts that contribute to the unique vulnerabilities of each campus.

Erin Capps, H2O Partners, NHMA

Per Aspera Ad Astra: Forseeable Natural Hazards—A Safer Future for Universities [and Colleges] Founded on Ethics, Sustainability, Good Business, and the Law

This presentation will explore No Adverse Impact (NAI), safe development, and natural hazard regulations to foster an open discussion on mitigation opportunities for resilient design and how liability, business practices, ethics for school design, operations, and maintenance weave together to help create a safer future for higher education institutions.

Ken D'Aquin, The University of New Orleans

Aligning Your IT Requirements with Resilient Resources

Continuing developments in cloud computing and server virtualization have created new opportunities for universities to dramatically increase the resilience of their critical information systems. These two technologies represent a powerful new IT trend that is also accompanied by new risks that are not always obvious.

Developing IT strategies that incorporate cloud-based services (such as Email, File Storage, LMS, etc...) can greatly increase the resilience of universities by relocating these services to another geographic region. However, existing regulations and policies for data security and retention are not always compatible with otherwise attractive cloud-based solutions. Knowing the right questions is the critical pre-requisite to choosing the right cloud-based solution.

Server virtualization is usually adopted for the potential cost savings. Unfortunately, this sometimes results in less reliable systems. The cause is very simple. It is much easier and less expensive to deploy server virtualization in a non-redundant fashion. This increases the risk of outages due to single points of failure. The loss of a single physical server that hosts a single application results in the loss of that application. If that same physical server is hosting a dozen virtual servers, then the loss is greatly multiplied. Redundant virtual infrastructures do no incur this risk. In fact, they increase resilience by eliminating the dependence of any application to a single piece of hardware, while still providing significant cost savings.

Peter Drenan, Dewberry **Ruth Lovelace,** University of Mary Washington

Navigating Post-Disaster Repair and Reconstruction

The pressure to rebuild after a disaster can be fierce and unrelenting. Colleges and universities impacted by an event will be pushed to re-open the doors and resume teaching and research quickly. What are the factors to consider? How do you balance the lost revenues, damage to research, faculty pay requirements, housing of students, temporary facilities and alternative transportation, communication, housing, lecture space, research and administrative computing needs? It's in the best interest of your institution to have a plan for how these repairs or reconstruction efforts will be funded. In addition to the issues of re-engagement you also need to understand the Federal Emergency Management Agency's

(FEMA) Public Assistance Program requirements for reimbursement and eligibility. While FEMA's program offers reimbursements to most colleges and universities, it comes with requirements and restrictions that need to be understood in order to protect your institution's investment and assure maximum return on investments. This session will cover the common challenges faced by program participants and offer suggestions on how to avoid common pitfalls.

Learning outcomes:

- Awareness of FEMA's Public Assistance Program and relevancy to colleges and universities Understanding of common challenges faced by colleges and universities in participating in the program
- Ideas on how to plan for the financial recovery aspects of disaster

Frannie Edwards, Mineta Transportation Institute, San Jose State University

Campus Roles in Emergency Management

Colleges and universities may become victims of natural, technological and human-caused disaster events, but they can become both self-reliant and a community resource through planning and preparedness. The campus is a multi-faceted environment with its unique population and resource base that can be viewed through several lenses. Each lens offers a different way of understanding the campus's role in disasters.

First, **the campus may be viewed as its own city**. It has a resident population in the dormitories and a commuter population of faculty, staff and sometimes students. It may have its own utilities, streets, roads, bicycle paths and police or security force. It has public buildings and quasi-private buildings, like sorority and fraternity houses. The president is like the mayor with policy making authority, and the Facilities Director is like the Public Works Director of a city. Therefore, like any city, it must be prepared for managing emergencies, disasters and catastrophes. Preparedness begins with the development of an emergency operations plan that provides a comprehensive approach to managing all aspects of a disaster, with roles assigned to the president and his cabinet and department heads. The plan must include guidance on coordinating with the local, state and federal civil authorities and any higher level Board of Trustees or Chancellor's Office. Next an emergency operations center must be created and staffed, with training for the EOC personnel. Like any city, the population of the campus should develop Community Emergency Response Teams (CERT) using the specialized materials for Campus CERT. Finally, these emergency management elements need to have drills for fires and evacuations, and exercises of the disaster-specific plan elements, like hurricane and active shooter scenarios.

Second, the campus is also a business. It provides a variety of services to its clientele. The students pay to receive an education. Some students also receive their housing and meals through a contractual relationship with the college or university. Generally there is a student health center that is fee or tuition supported. Each of these is a business-like enterprise that relies on sources of income and estimates of expenses. Therefore, like a business, the campus must have a business continuity plan. How will it deliver the services for which a contract has been made with the students? What are the expectations of staff members for disaster response to support those expectations? Is there an alternate site where services can be performed if the campus is unavailable due to disaster-related damage? Is there business

interruption insurance? Has a reciprocal agreement been made for the continuation of student education with another college or university?

Finally, the campus is part of a larger community. Through advanced planning and coordination **it may become a resource to that community** in times of disaster. Its gyms could be used for mass care. The students could become volunteers, gaining practical experience in their future career areas, such as medical services, child development services, social work, or damage assessment. The faculty might be used as subject matters experts by the community.

Nicolette English, GOHSEP

Mitigation Planning 101

Please contact Nicolette English at nicolette.english@la.gov for further information.

Melanie Gall, Louisiana State University

Advancing Disaster Resistant University Planning Beyond the Basic Requirements

This presentation provides an overview of the activities involved in the development of the LSU System Disaster Resistant University plan with a particular focus on non-traditional efforts. Developing an effective plan for a college campus is challenging: a campus' footprint is fairly limited, which presents obstacles in regard to data availability and vulnerability modeling; student populations are often unfamiliar with local hazard conditions; hazardous research and materials are frequently present on campus; and so forth. Thus, generating meaningful and realistic hazard, vulnerability and risk assessments for a university by means of traditional input data and modeling approaches is difficult. New and creative ways of leveraging the institution's strengths are needed to overcome these obstacles.

In an attempt to develop a comprehensive and effective planning tool, the LSU System Plan went beyond the basic DRU requirements. Unique to this Plan are: (a) an extensive building assessment and the integration of the assessment data into HAZUS-MH, (b) the use of a user-generated population and building inventory for more realistic impact modeling in HAZUS-MH, (c) the utilization of day-time population estimates instead of census data, (d) the implementation of a user-defined analysis level at the building level – instead of census blocks, (e) comprehensive archival work to supplement generic hazards information, (f) incorporation of a hazardous material inventory, (g) direct involvement of students through service learning courses, and (h) the utilization of social media, web-based mapping and feedback tools.

Vijaya (VJ) Gopu, The University of New Orleans **Edward G. Schleider,** The University of New Orleans

Critical Need for Improved Construction Standards for Disaster Resilient Homes

Hurricane Katrina inflicted incredible damage to residential buildings in the Gulf Coast region. Nearly a quarter of million homes in New Orleans alone were devastated by a combination of flooding and wind.

A fairly substantial percentage of the homes suffered damage primarily due to lack of proper design for wind resistance. After this major calamity, Louisiana adopted stricter building codes. However, major concerns exist on both the adequacy of the building codes and their implementation. The critical role that the home insurance industry can play to improve the quality of residential home building stock in the nation is highlighted. This presentation provides an overview of the various types of damages suffered to residential homes during the hurricane and lesson learned from these damages. The challenges involved in design of disaster resilient homes and the approach the designers and builders need to take to mitigate potential damage are discussed. The need to utilize emerging technologies to enhance the structural resilience of homes in extreme wind events will also be discussed.

Kay C. Goss, CEM, World Disaster Management, LLC

Building Campus Resilience: Pre-Disaster Mitigation & Preparedness

This presentation will clearly define resilience as an overarching term, distinguishing it from disaster resistance, hazard mitigation, emergency preparedness, business continuity, homeland security, national security, border protection, law enforcement, fire service, emergency response, disaster recovery, emergency medical services, economic security, food security, information security, and physical security, by defining it to include all of these processes, programs, and services.

The term resilience is overused and little understood, outside the emergency services professions. It is increasingly used within the profession; therefore, we must be clear with each other about what it encompasses, so that we are clear with our wider audiences of the general public.

I will look at the history of the use of the term in relation to emergency management generally and with relation to campuses in particular.

Rebekah Green, Resilience Institute, Western Washington University

Strategies for Smaller Campuses: Lessons on Campus Planning from a Higher Education Consortium

Universities and colleges, at their core, provide students with an opportunity to expand their thinking, gain practical skills and grow personally and professionally through a structured series of experiences. Yet, disasters can interrupt traditional place-based education and prove to be intractable policy problems. The challenges of developing robust plans and drilling them extensively – key elements of building resilient campuses – seems most pronounced among smaller college and university campuses. This paper describes how three small to moderately-sized higher education institutions in Whatcom County, Washington – a technical college, a community college and a regional university – formed the Resilient Bellingham Consortium to support each other in better preparing for emergencies and enhancing their resilience to campus-based disaster events, despite limited resources. Internally, all three institutions struggled to find the capacity to do emergency drilling. Unique campus cultures enhanced or detracted from emergency planning, but all three assessed their planning as inadequate. The formation of the Consortium allowed for a more efficient strategy and better exploration of resilience in the context of smaller institutions. Together the institutions built common templates, hired joint staff and created a suit

of joint exercises appropriate for their small size and campus-specific needs. In the process, they shared perspective, and ultimately resources, and developed strategies for improving preparedness on small campuses through sharing strategies and leveraging resources.

Dana M. Greene, University of North Carolina, Chapel Hill

Mitigation for University Health Systems and Transfer Trauma: Hurricane Sandy as Case Study In the aftermaths of Hurricanes Katrina, Rita, Irene, and Sandy, as well as other natural and technological disasters (wildfires, tornadoes, tsunamis, earthquakes, and terrorist attacks), University health systems have led the way in both continuing to care for inpatients, as well as working to triage those affected by both forecasted and "surprise" events. As a result, medical manpower is stretched thin, and those working in predominately research units within University health systems experience a shift in responsibilities away from credential specific (simply MD or RN) to being "jacks of all trades," and taking on responsibilities of orderlies, lab techs, emergency technicians, life-flight paramedics, and ICU doctors and nurses. In such a scenario, the most critical patients in the ICU are those who require the most supervision, and who fall prey to the greatest consequences when University health systems (e.g., New York University Health System, Tulane University Hospital, and Louisiana State University Health System) lose power and must move patients to other facilities that can take over responsibilities for providing critical care.

This presentation draws upon data from Hurricane Sandy and her impact on New York University's Health System (which lost power during the storm), and examines the impact of the transfer trauma experienced by patients who must be moved away from a top research hospital to a secondary facility. Given that the greatest ramification of transfer trauma is mortality, I will discuss this risk with regard to the Changes in Health, End-Stage Disease and Symptoms and Signs (CHESS) measures. Further, I will provide recommendations for greater disaster preparedness and mitigation for University Health Systems, so that critical care patients will experience greater health outcomes by being able to remain at these Hospitals without compromised care.

Troy Harris, Westmont College

How Emergency Planning Standards Can Help You Do Your Job

You will leave this session with a fresh appreciation for emergency planning standards: where they come from, how to use them, why they matter. And you'll be introduced to the UCC Crosswalk of Institutional Resilience Standards,* a new tool for easily navigating a dozen of them.

Why? Standards can serve as both reference point and guide for comprehensive planning, and will help ensure your plan is complete.

What & Where? Standards are promulgated by public and private entities (professional associations and dedicated standards bodies). Some standards, though, are not ideally suited for the higher education setting.

How? Learn the process for developing standards; how they move from concept to adoption.

Who? Standards are written by experts, but they are human. Economic, political and turf considerations can play a part.

Which? Each of the standards has pros and cons. All bring something of value, and all have gaps—some of them surprising. Do you pick a single one, or cherry-pick the best of each? Should you simply rely on "best practices" instead of using standards?

When? Learn when in your cycle to address or adopt standards. Whether you are new to emergency planning and could use a jump-start, or a seasoned pro wanting to put polish on a lifetime investment in the discipline, standards can offer vital help to ensure your plan is optimized for your school.

*- A product of the Standards Committee of the University & College Caucus of the International Association of Emergency Managers.

Matthew Hart, Tufts University

Continuity Planning at Institutions of Higher Education

While emergency planning and disaster recovery are generally well established within institutions of higher education, there is an increasing focus on business and academic continuity. How will we continue or quickly resume the institution's mission of teaching and research following a disruptive event?

The presentation will first introduce continuity planning and outline how it complements the institution's existing emergency and disaster recovery plans. Why implement continuity planning? What are the benefits and advantages of such an undertaking? The value and tangible benefits of effective continuity planning will be emphasized.

Some participants will likely have already recognized the need for continuity planning, but are struggling to gain the traction necessary to initiate a continuity planning effort at their institution. The presentation will provide guidance on "selling" continuity planning to not only senior executives, but also to operational managers.

While every institution of higher education is unique, there are common challenges that many institutions are likely to face as they address continuity planning. Participants will be given flexible strategies for overcoming these obstacles within their own institution's political climate and culture.

The continuity planning effort at Tufts University, a project funded by the Department of Education Emergency Management in Higher Education grant program, will also be covered. "Tufts Ready|continuity" is centered around an online continuity planning tool, Kuali Ready, that is tailored for institutions of higher education.

Pamela Jenkins, The University of New Orleans

The Slippery Slope of School Safety

In this presentation, we address the issue of the fragility of campus safety. The uniqueness of a college campus creates a context for safety that requires an intentional and specific understanding. Campus life for many is no longer (or perhaps never was) 'an ivory tower'— a place separated and protected from the rest of the community. However, many still have the attitude that a campus is not like the real world in the United States. And in fact, colleges and universities are often much safer and more open than communities around them. Yet, ask any student affairs director or safety personnel, and they can tell you of the 'near misses'- the student, staff, or faculty that was identified just in time. This 'just in time,' however, might have taken months or years for the academic community to respond. Through the exploration of the dimensions of climate issues on university campuses, we discuss how universities can be lulled, for a number of reasons, into reacting rather than acting toward increasing safety. Universities are the repositories and creators of knowledge, but that transition from knowledge to best practice can be difficult. Rather than the institutions where things happen, universities have the potential to be proactive, working to create spaces where safety is part of both knowledge creation and practice.

Alessandra Jerolleman, LLC, NHMA

Emergency Planning for Child Care: Protecting the Youngest on Your Campus

Many Colleges and Universities either provide child care, or house a provider, on their campus. This is an invaluable resource for professors, staff and students. These facilities carry the tremendous responsibility of caring for children in even the most unpredictable and vulnerable situations — emergencies. Disasters and emergencies can strike anywhere at any time, including the many hours children are in in the care of childcare professionals, separated from their families. This session will cover basic emergency planning for child care facilities. It is critical that professionals are equipped with the skills and resources needed to protect children and provide for their unique needs when emergencies strike.

Research has shown that parents will disobey evacuation orders in order to ensure that their children are protected. Ensuring that the families of those in child care are aware that there is an all hazards plan, know what that plan entails, and understand how to be reunified with their child following an emergency is critical to making the college or universities' own plans work.

Alessandra Jerolleman, LLC, NHMA

The 9-Steps to Disaster Recovery: How to Become Better Prepared for the Next Event

Universities impacted by disasters face tremendous challenges as they work to rebuild and recover. As we have seen across the nation following major disasters, there is extreme pressure to rebuild, and resume operations quickly. Communities and institutions face the very real impacts of loss of business, employees, vendors, students and residents. Universities have an opportunity to utilize the lessons learned from Hurricane Sandy and other events, as well as the new risk data being made available to ensure that they plan now to rebuild in a safer and smarter fashion which minimizes the future impacts of a similar event. Taking steps to rebuild safer and smarter through the use of mitigation tools, such as elevation, can also help to defray the increasing costs of insurance in the impacted areas.

Joe Johnson, GOHSEP

Benefit Cost Analysis

Please contact Joe Johnson at joe.johnson@la.gov for more information.

John J. Kiefer, The University of New Orleans

The University as a Resilient Community: Applying Lessons Learned from Katrina

The University of New Orleans (UNO) was one of the first universities to receive a Disaster Resistant University (DRU) grant from the Federal Emergency Management Agency (FEMA). Within a year of starting the DRU planning initiative at UNO, Hurricane Katrina struck the area on August 29th, 2005. This catastrophe provided a meaningful (albeit unwelcome) opportunity to evaluate the plan, learn, and redesign as needed post-Katrina.

The presentation will provide a brief history of the development of UNO's DRU planning process pre-Katrina. This will be followed by a brief description of the impact of the hurricane on the UNO community...its physical plant, its operation, its students and its faculty. Certainly, the long-term recovery process of the university presented many challenges, and the author will briefly cover how and why various courses of action were developed. We'll give a candid assessment of what worked, what didn't, what we could have done better, why some measures were effective, and what we should have done differently.

The presentation will conclude with a brief description of UNO's move to a continuous process improvement (CPI) paradigm; why it's important to the DRU process and to emergency management in general.

Ernst W. Kiesling, Texas Tech University

The Role of Safe Rooms in Disaster-Resistant Universities

Many university buildings have large footprints and were designed and built to comply with modern building codes. Such buildings usually contain spaces that offer considerable occupant protection from extreme winds, even if the designer did not consciously design for such protection. But there also exist many campus hazards from extreme winds where safe rooms can be appropriately employed to provide a high degree of occupant protection. Some of these situations will be described along with available safe room models to reduce the hazard.

Claire Connolly Knox, University of Central Florida

Building a More Resilient University Campus: Lessons Learned from Six Emergency Management Service Learning Projects

Emergency management students must be prepared to enter the evolving and challenging work environment with practical and theoretical knowledge. Yet, linking the two forms of knowledge in a meaningful way remains an educational challenge. One pedagogical approach gaining popularity in the emergency management discipline is service learning.

University of Central Florida graduate students in the Managing Emergencies and Crises course are collaborating for the first time with the university's Office of Emergency Management on six service-learning projects. The six projects are: (1) Develop an evacuation plan for the main campus; (2) Develop an evacuation and housing plan for resident students living on campus; (3) Research various types of technology used in Emergency Operations Centers (EOC) in institutions of higher education; (4) Research the placement of an Office of Emergency Management in an institution of higher education organizational chart; (5) Develop measurable objectives and a pre/post test to measure the impact of public outreach for active shooter awareness educational program; and (6) Research emergency notification systems at institutions of higher education.

This presentation will briefly review national trends in using service learning in the emergency management discipline, highlight the final products of this semester's service-learning projects, and conclude with lessons learned from the student, professor, and client perspectives.

Tamivo Kondo, Kobe University

The Role of Universities in Post-Disaster Community-Based Recovery Planning after Great East Japan Earthquake

On March 11, 2011, the magnitude 9 earthquake that struck off the coast of north east Japan was followed by a massive tsunami that killed almost 20,000 people and displaced more than 350,000 residents. The decreased function and capability of local government made strong demand in society for the role of planning universities to get involved in post-disaster recovery planning in Tohoku region. It is said that there are more than 300 communities in which need to work on post-disaster recovery planning. Universities' faculty and students play significant roles today to pursue resilient and sustainable communities between partnerships with local government and community organizations in a variety of ways, contributing scientific knowledge of mitigation for tsunami, working as facilitator of post-disaster community-based recovery planning with residents, restoring lost towns and villages by 1:500 scale models, and empowerment of survivors to be main player for post-disaster recovery activities etc.

One of the important aspects of a resilient society is that all stakeholders involve and collaborate to achieve resiliency for disaster. This presentation provides several examples: How have universities assisted post-disaster recovery planning working with communities, and its accomplishment to date and challenge ahead for long-term post disaster recovery planning after Great East Japan Earthquake. The presenter has focused on housing recovery after Hurricane Katrina (2005) and Great East Japan Earthquake (2011), both of which have similar characteristics such as long term evacuation of survivors and widespread destruction of the built environment.

Stacey Mann, Jacksonville State University
Oluponmile Olonilua, Texas Southern University
Jeffrey Van Slyke, Jacksonville State University
Sergeant Ryan M. Chesley, Berry College Police Department
Lt. David Abels, Louisiana State University Police Department
Kelly Osterbind, University of South Alabama

Roundtable Discussion: The Challenge of University Resilience: Practicing What we Preach & How Faculty and Staff Can Make a Difference

Following Hurricane Katrina in 2005, students at colleges and universities along the Gulf Coast found themselves in a predicament. The classrooms they once filled and the residence halls they called home were destroyed or uninhabitable. At that point, many colleges and universities not directly impacted by the storm opened their doors to these students. While these same schools understood the impact that a major disaster could potentially have on their own operations, many may not have taken the opportunity to create resilient institutions through mitigation and preparedness. Like local governments, universities and colleges face major obstacles in overcoming the challenges of working toward resilience. Lack of financial resources, knowledgeable staff, and time constraints are common to many organizations. And, while faculty members are often overwhelmed with the demands of their own positions and staff members often have to do more with less, it is important for all college and university personnel to understand that resilience is not a trend, but rather a necessity and that universities must think beyond emergency management focused plans.

This roundtable brings together a diverse group of individuals at colleges and universities, including faculty, college and university police officers, and a university registrar who have identified creative and innovative methods of overcoming the challenge of resiliency.

Mamun Miah, University of Mississippi Kyle Bethay, University of Mississippi C. Mullen, University of Mississippi

Natural Hazard Mitigation Plan Update for the University of Mississippi

The Disaster Resistant University (DRU) project was started at the University of Mississippi on August 24, 2004 with funding from a FEMA grant through the national DRU program. The objective of the project was to create a mitigation plan for the university in order to make it safer against the natural hazards by minimizing losses. A DRU Advisory Committee, created as a result of this project, identified and prioritized 25 mitigation action measures that will reduce the University's vulnerability to most damaging hazards. The plan delineates eight potential natural hazards that are of concern to the university the most damaging of which were determined by a HAZUS-MH based risk analysis to be tornado, earthquake and straight line wind.

The proposed talk will present preliminary results of risk analysis being performed to account for changes to the original mitigation plan as a result of developments on the university campus over the last five years. These changes include significant expansion and modernization of buildings and critical facilities affecting emergency response and potential loss estimation. In addition changes have occurred

in the knowledge base and design criteria in major codes. For example, wind speeds in non-hurricane zone have increased and a new earthquake scenario for the New Madrid Fault Zone has become available with significantly higher ground motions expected for the campus. Most importantly, the campus building inventory has been updated with replacement costs and contents values.

Deborah G. Mills, Dewberry Consultants LLC **Jane Sibley-Frantz,** Dewberry Consultants LLC

Ensuring the Safety of our Institutions of Higher Learning

Following devastating natural and human-caused disasters, including the attack on the Pentagon, Virginia welcomed early 2004 Pre-disaster Mitigation Grant funding for three DRU plans. Ultimately, the Commonwealth supported development of eight public university DRU plans through FEMA HMA grant support. The SHMO was quoted as saying that, "university hazard planning is critical since universities not only represent a microcosm of society, they concentrate populations of citizens, students, business enterprises, critical research and often medical institutions." Each of eight Virginia DRU Plans was unique and different responding to well-varied university missions, programs, campuses, hazards, vulnerabilities, challenges and priorities. Two universities, UVA and the Virginia Commonwealth University are home to medical centers hosting critical medical schools and Level I trauma centers; Thomas Jefferson's Academical Village and Rotunda at UVA anchors a World Heritage Site; and the University of Mary Washington's James Monroe Museum archives more than 10,000 rare documents.

On April 16, 2007 the Virginia Tech tragedy unfolded. It will never be fully known if tragedy could have been prevented, but elements of Dewberry's DRU building analysis for fire and emergency access were directly related to the forensic study in crime investigation and evaluation of campus security. As DRU development and plan implementation continues, Dewberry will be pleased to share lessons learned on the seven Commonwealth DRU plans which we facilitated.

Will Moorhead, All Clear Emergency Management Group Ginny Schwartzer, All Clear Emergency Management Group

Addressing the Common Challenge: Communication Turning "Can you Hear me Now?" into "Do you Understand What I am Saying?"

The most often cited reason for frustration or failure during any endeavor is difficulty with communications. Rarely is the problem tied to equipment failure. The root cause is often the habits, methods, and actions employed by people trying to communicate.

Being able to effectively relay information to another person goes beyond devices, technology and language skills. Essentially, communication is conveying information so that others may understand and both parties reach consensus on the meaning of that information. Unfortunately, in emergency situations, appropriate focus on communications is not always recognized.

In order to improve communications, effective habits for receiving and disseminating information must be developed. The development of habits begins with practice during daily activities so that the skills can be performed during emergency operations. Participants will learn tips and tricks to practice communications skills within their organizations.

This session will provide lessons learned and best practices discussed during a series of statewide emergency management projects. The projects focused on improving communication and coordination among public and private partners before and during emergencies. Participants in this session will gain an understanding of trainings and tactics employed within agencies and planning regions to address the commonly cited area for improvement, communication. The facilitators will demonstrate techniques and provide examples of successful communication practices.

Earthea Nance, The University of New Orleans

Transportation Safety and Access: A Case Study of the St. Claude Bridge in New Orleans
The community-university collaborative model, first developed in early-1990s public health research, expands opportunities for new research partnerships and joint problem-solving. This model is ideally suited to land-grant colleges and urban research universities whose mission involves community engagement. At the University of New Orleans, this model is employed in "practicum" graduate courses offered in the Department of Planning and Urban Studies. One such practicum partnered with the Lower 9th Ward community in spring 2012 to address serious safety problems with the St. Claude Bridge. The bridge, which linked the lower and upper halves of the community and served as an essential transportation corridor to jobs in the central business district, was particularly unsafe for pedestrians and bicyclists. This presentation will highlight the safety problems experienced by the community. It will also describe how graduate planning students and community members successfully worked together to develop a set of solutions, and ultimately presented these solutions to city leaders and transportation officials.

Shandy Ogea, Louisiana State University Carol Friedland, Louisiana State University

Field Planning and Data Collection Practices for Conducting Detailed Natural Hazard Vulnerability Assessments of Campus Structures

Pre-disaster vulnerability assessments are a primary method to proactively measure and mitigate potential damage caused by natural hazards. Vulnerability assessments are essential to hazard research and are central to the development of hazard mitigation strategies at the local, national, and international level. Higher education institutions are a community that benefit from natural hazard vulnerability assessments, since damage to campus buildings and infrastructure can result in significant losses that cause interruption to the institutional mission.

Detailed building assessments are better suited for collecting customized, site specific data that are needed for accurate and thorough vulnerability assessments of individual campus buildings. At the current time, however, there are limited, peer reviewed or broadly accepted protocols for planning and conducting such detailed building assessments.

This presentation will present a formalized approach to field planning and data collection practices that support detailed vulnerability assessments of campus buildings. The described practices may be used for various types of campuses located in regions that are impacted by high-wind, hail, and flood events. Pre-assessment and post-assessment strategies will be discussed at length; in particular, the identification of regional hazards, the prioritization and investigation of campus buildings as relates to the various university functions, (e.g. student life, academics, research), assessment route mapping, qualitative risk and vulnerability assessments critical to field decisions for data collection, and the digital storage and document production of the field assessment data.

Frank Pagano, DHS-FEMA

Linking Mitigation & Resilience

Please contact Frank Pagano at frank.pagano@fema.dhs.gov for more information.

John J. Perrone Jr., Homeland Security Management Institute, Monroe Community College

Community College FEMA Citizen Preparedness Training Initiative

This 45 Minute presentation will highlight College opportunities through a recent joint Federal Grant Program (Department of Homeland Security- FEMA) entitled: The **Community College Citizen Preparedness Program (3CP2)**. The presentation will be from one of the lead community colleges and include the training material development, expansion of the program via community resources and related homeland security programs and resources available to colleges. The program is now available in an online format and colleges and communities are free to use it via the web link for their students, faculty and the general population. The 3CP2 program is a 2 hour program designed to train students, faculty, staff and others on how to be prepared for up to 72 hours of a natural or artificial disaster. The course is entirely free.

At the conclusion of the presentation, attendees will be provided with the information on how to participate in the program and join a tremendous forum for collaboration among colleges/communities. This program can easily transition into a College or Community CERT Program. The presentation includes an online demo of the program.

M J Plodinec, Community and Regional Resilience Institute

The Next Step - Beyond Disaster Resistance to Resilience

The Disaster Resistant University program was initiated by FEMA during the Clinton administration. It eventually lost funding, but has been continued by several institutions of higher learning (IHLs) because they found that the program provided a practical common sense approach to disaster planning and mitigation.

Recently, the Community and Regional Resilience Institute (CARRI) has begun an initiative to help IHLs go beyond *resistance* to *resilience*. No matter how resistant an institution is, it will eventually have to respond to and recover from an unexpected crisis – a lone gunman, an epidemic, an athletic scandal, or a natural disaster that exceeds its resources. Sometimes, the IHL will be caught in the cascading impacts of a crisis that strikes its neighboring community.

CARRI has developed a *Community Resilience System (CRS)* to help communities enhance their resilience. At FEMA's request, CARRI is adapting its *CRS* to help IHLs to become more resilient. At its heart, the *CRS* (like the Disaster Resistant University program) is rooted in a Whole Community approach – looking at all of an IHL's stakeholders. CARRI's campus resilience system will extend the successful framework of the DRU program by:

- Looking beyond continuity of operations toward rapid and complete recovery of the institution.
- Considering a wider range of risks.
- Developing deeper partnerships with its stakeholders so that, if necessary, they can be more rapidly mobilized to assist in recovery.

The essence of resilience is being able to rapidly recover from adversity without lasting harm; that is the goal of the campus resilience system.

Pam Rault, The University of New Orleans

Preparation for the Storm: Evacuating Students Prior to a Hurricane

The beginning of the fall semester presents an atmosphere of new found energy and excitement on the college campus. The campus sidewalks are bustling with heavy foot traffic, new students are scurrying to find their classrooms, and the distant sound of music coming from welcome back events fill the air. However, as most university leaders along the Gulf Shore are monitoring enrollment numbers, they are also keeping a watchful eye on the potential of tropical disturbances in the Gulf. As university leaders at the University of New Orleans, we found ourselves in this situation this past Fall semester when the weather associated with Hurricane Isaac was threatening the New Orleans area. Due to the unpredictability of the storm, the decision was made to close the campus and evacuate the on-campus students to the pre-planned evacuation site at another university.

This session will provide participants with a brief theoretical overview discussing the Crisis Matrix framework as well as the Crisis Management Cycle with an emphasis on the environmental crisis. Then moving from theory to practice, the session will discuss the process of negotiating a student evacuation destination, setting up the terms of agreement between the two universities, coordination and communication when the decision was made to evacuate, the collaboration with student housing and campus police, as well as the student response to the evacuation. The session will conclude with lessons learned from this process and allow for others to share their related experiences.

Roxane Richter, World Missions Possible

Gender-Aware Disaster Care: Simple Interventions That Can Reduce Impact, Suffering and Post-Disaster Emergency Healthcare Costs

As EMS planners and providers, we take many special populations' needs into account in a disaster - infants, elderly, disabled, and so on - but we should not overlook the critical distinctions in gender-specific care, which are based not only on a woman's physiological makeup, but within her psychosocial framework. This training session will identify key factors in female-specific care, including 12 risk factors that affect vulnerability, impact, and exposure; PTSD and pain; triage and advocacy; and supplies and services.

Current research points to a pattern of gender differentiation in all areas of the disaster process - preparedness, response, impact, risk perception and exposure, recovery, and reconstruction. This session will highlight 19 simple interventions that can significantly reduce pain, suffering, and costs, including: a pregnancy registry for daily prenatal nutritional advocacy check-ups; rape intake personnel and kits; the availability of "fact sheets" concerning potential effects of vaccines, environmental toxins on pregnancies and outcomes, as well as information and treatments for vaginal infections, genital rashes due to environmental contamination, toxic shock syndrome, etc. Oftentimes it is these early (simple) proactive patient interventions, supplies and treatments that are diverted or disregarded that can prove much more acute (critical) and costly in their latter (and more advanced) stages.

The research's results support the contention that many gender-sensitive services and supplies were needed in post-disaster care settings, but were inadequate or non-existent, and that EMS planners and providers to take a more cognizant and proactive approach to gender-specific care in preparedness, aid and advocacy.

Bennetta Robinson, Jackson State University Coastal Hazards Center of Excellence **Rachel Dowty Beech**, Louisiana State University

Building the University-Community Partnership in Disaster Management

The Center for Defense Integrated Data (CDID) and the Coastal Hazards Center of Excellence (CHC) at Jackson State University have developed the Disaster Response Intelligent System (DRIS) to ensure interoperable communication, rapid data processing for safe and timely evacuations, scenario analysis, and decision support during disaster events. With an increasing occurrence of both natural and manmade disasters, theoretical underpinnings have emerged to address not only how communities respond to disasters but also how they plan for such. Currently, there is a need to expand upon the existing paradigm in the highly specialized, practitioner driven field of emergency response and disaster management. Perhaps there are no better institutions to guide such expansion than institutions of higher education.

The DRIS application has, as an extension, an education model wherein the system is installed at universities with disaster management programs or related curricula. Such installation builds on the university's capacity to foster a multi-disciplinary approach to emergency response and disaster management by incorporating academic areas such as urban planning, computer science, environmental science, social science, geography, and various disciplines of engineering among others.

This presentation illustrates how the installation of DRIS at partner universities supports a theoretical understanding of emergency response and disaster management and serves as a tool to continuously train current and future disaster management practitioners and policymakers. In this light, DRIS supports both the local university and the communities in which it serves. The DRIS-education model will play a significant role in establishing the university-community partnership especially as it aids in evacuating, protecting, and sheltering students and residents. The experience gained in applying this model may lead to development of a version tailored specifically to the unique emergency management needs of university campuses, including their context within the larger community.

Jim Salzwedel, U.S. National Weather Service

U.S. National Weather Service Weather Ready Nation Initiative

The National Weather Service (NWS) has embarked on an initiative to first and foremost save more lives and livelihoods. By increasing the nation's weather-readiness, the country will be prepared to protect, mitigate, respond to and recover from weather-related disasters. Society's ability to prepare for natural disasters requires a societal response equal to the risk. Government cannot do this alone, which is why the NWS is leveraging its vast nationwide network of partners, and incorporating new partners who are beginning to share the vision of building a Weather-Ready Nation. The purpose of this presentation is to discuss how the NWS is accomplishing this task with a focus on the pilot project at the local forecast office in Slidell, LA.

Anna K. Schwab, Center for the Study of Natural Hazards and Disasters, The University of North Carolina at Chapel Hill

Managing Risk in a Changing Climate

In the 5th century BC, Socrates taught his students under the plane trees of Athens, Greece. Athens was hot and dusty; the leafy boughs provided a cool, shady canopy. Plane trees are not native to Greece; they were imported and planted deliberately – in large part because of the shade they give. Although it may not have been recorded by Plato this way, Socrates was teaching in a community that had adapted to the climate.

Today our climate is changing and we face new risks. Increased storm intensity, higher temperatures, more frequent droughts, sea-level rise – these are among the many recurring events with the potential to damage the economic, environmental and social fabric of cities and towns. Institutions of higher education are exposed to these types of natural hazards in much the same way as their host communities. When we look at the populations involved, the campus environment can be considered one of the most vulnerable to the impacts of hazards. But like their host communities, institutions of higher education also have the opportunity to protect themselves and adapt to our changing climate.

This session will provide a broad overview of approaches available to local communities to mitigate the impacts of natural hazards and adapt to climate change, drawing parallels to the university setting as appropriate. Many of these approaches rely on existing authority or modifications to policies and programs that are already in place; others will involve more intensive action. The session will also provide information about resources for further exploration of climate change adaptation that interested universities and colleges may wish to pursue.

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Nandini Seth, The University of New Orleans Mariana Marmol, The University of New Orleans

Stormwater Management at The University of New Orleans

Due to the below-sea-level elevation and coastal location of New Orleans, it is imperative that the city, its inhabitants and its organizations learn to deal efficiently and systematically with water. Following substantial damage from Hurricane Katrina in 2005, The University of New Orleans, which is located in the southern shore of Lake Pontchartrain, embarked upon an ambitious effort to improve its campus. The University has adopted a Hazard Mitigation recommendations and feasible measures for implementation to reduce and prevent damage. However, the university would strongly benefit from having a Stormwater Management Plan that would limit negative environmental impacts on UNO campus.

The objective of this research project is to examine ways that The University of New Orleans could improve stormwater drainage and flood prevention. As an effort to foster and encourage the sustainability component throughout UNO's diverse curriculums, our recommendations will revolve around an interdisciplinary cooperative whose responsibility will be the creation of a Stormwater Management Plan for the university. As part of the study, the authors will look into the existing stormwater management efforts at the university level and city level. The authors will create at least one innovative green infrastructure design for a site on-campus showing how managing stormwater at its source can benefit the campus community and the environment.

Pat Skinner, LSU AgCenter Maurice Walcott, LSU AgCenter Joshua Kent, LSU Center for Geoinformatics

Time: The Fourth Dimension of Hazard Mitigation Planning

Coastal Louisiana has always had a very dynamic geography. It has been fairly well established that conditions "on the ground" change rapidly enough that our primary risk-assessment tool (the Flood Insurance Rate Map) is inadequate for regulating development - especially development that should have a meaningful life expectancy. In addition to the adverse impacts of continued development that increases run-off and decreases flood storage capacity, absolute sea level rise, and disappearing wetlands, there is the more complicated issue of subsidence.

In this session the presenters will share information about rates of subsidence in Louisiana, the evidence of subsidence, factors influencing subsidence (including the ties to levees and drainage), and examples of possible long-term consequences. We will also show how collaboration between the LSU AgCenter and LSU Center for Geoinformatics has enhanced the University's continuously operating GPS reference stations (CORS), improving the data used for flood risk forecasting and making the information and evidence of changing conditions more accessible to the people of Louisiana. This information, in combination with the Flood Insurance Rate Map, provides a more complete picture of future risk. Future risk is the risk to be mitigated. Thus "time" becomes the fourth dimension of mitigation planning.

Nathan Slaughter, Atkins North America Caroline Cunningham, Atkins North America John Shows, Mississippi Gulf Coast Community College

Creating a Multi-Campus Hazard Mitigation Plan for the Mississippi Gulf Coast Community College System

This session will present the challenges and successes of developing a multi-campus hazard mitigation plan for the Mississippi Gulf Coast Community College (MGCCC) system located across southern Mississippi. The MGCCC system has long been impacted by natural hazards such as hurricanes and tropical storms, severe thunderstorms, floods, and tornados. In 2010, MGCCC officials initiated development of a multi-campus hazard mitigation plan to include six different locations.

The steps undertaken in the planning process include:

- Development of a Disaster Mitigation Planning Team
- Conducting a risk assessment
- Identifying plan goals and associated mitigation actions
- Developing plan maintenance procedures

The planning initiative resulted in a comprehensive, multi-campus hazard mitigation plan for MGCCC that meets all State and Federal requirements. The plan was approved by FEMA in June 2012. Some of the challenges and successes encountered in the development of the plan will be presented.

Emma Stocker, University of Oregon

Social Media in Emergency Management: Strategies, Use Cases, and Tools

The phases of Emergency Management have moved into the virtual world. We can use Facebook to prepare, Twitter to respond, and KickStarter to recover. But with limited staff, time, and even experience, how do we pick tools that will help meet our specific communication needs? This session will include an overview of social media communication tactics, beginning with identifying communication gaps and expanding to discuss leveraging strategic communication partnerships. Also, an assessment of several campus and community use cases where social media tools were used effectively throughout the phases of emergency management. Lastly, a survey of several social media tools available to practitioners that can actually make our jobs easier.

Michelle M. Thompson, UNO-PLUS Brittany Arceneaux, WhoData.org

Hoffman Triangle Neighborhood Planning from the Inside Out

The Hoffman Triangle in Central City New Orleans continues to emerge and re-claim the assets that were lost post Hurricane Katrina in 2005. Through the efforts of the Hoffman Triangle Neighborhood Association, Associated Neighborhood Development, WhoData.org and the University of New Orleans Department of Planning &Urban Studies (UNO-PLUS), property condition assessments and remediation neighborhood plans, that move the community from recovery to reinvestment, have been completed since 2011. The 'broken windows theory' suggests that resilient neighborhoods must first appear to be stable, habitable and safe especially post-disaster.

Neighborhood stabilization efforts have included identification, monitoring and mitigation of blighted properties, cleaning storm drains, evaluation of broken street lights, and monitoring of illegal tire and trash dumping for removal by the City of New Orleans. Equally important is conveying the story of potential or developed short and long-term investments such as affordable housing, park renovations, new business development and the implementation of a New Orleans Police Department crime prevention strategy that works with residents as partners. The Hoffman Triangle public participation geographic information systems (PPGIS) program has expanded the role of the University, empowered the residents and reflects model ways in which the City can directly contribute to resident-led neighborhood stabilization efforts. This presentation will report on the 2012 Hoffman Triangle PPGIS which supports volunteered geographic information (VGI) that integrates City and State data for future neighborhood resiliency plans.

Phillip Van Saun, University of California, San Diego

Crisis Gaming as an Element of Risk Mitigation and Organizational Resilience: A Case Study of The University of California, San Diego

The presentation will detail the development and use at the University of California San Diego of 'crisis micro-games' e.g. risk and response brainstorming sessions, and the introduction of fast and frugal decision-making processes, as elements of organizational risk mitigation and resiliency. The presentation will include an example of a campus-based micro-game. Envisioning options which are not naturally evident is a key crisis-leadership skill that can be developed with study and practice. An example of this technique involves engaging in simulated crisis "micro-games" where leaders envision a scenario which could negatively impact their organization and brainstorm possible solutions. The learning archived from these games can help leaders anticipate and mitigate potential crises.

Pat Young, University of Delaware

What about Collections? Mitigation Best Practices for University Collections to Ensure Resilience When considering disaster mitigation practices and disaster resilience within the university context, naturally and logically the first consideration is for the protection and safety of university community members – students, faculty and staff. While this focus is of primary importance and value, a secondary area of concern is often overlooked – the collections of documents, records, objects and artifacts that are of vital importance to the ongoing function of the university itself.

This session will consider important steps that can be taken to address disaster mitigation, preparedness, response and recovery within university collections by examining the case study of the University of Delaware's Emergency Response Working Group (ERWG). Comprised of collection managers from throughout the University and representatives from key support units, ERWG seeks to coordinate emergency preparedness, planning, response operations, and recovery activities among administrative and academic units that manage collections of objects and records of importance and value to the University of Delaware. In existence for approximately five years, ERWG has undertaken an aggressive agenda to provide members with the skills and resources needed to ensure the greatest level of success in mitigating the potential impact of disaster events. The organization has also established a framework and structure that enable prompt response to disaster situations, enabling member units to realize the greatest level of resilience following disaster events. This session will examine the structure and practices of ERWG that make it a model for other universities in their endeavors to address disaster mitigation in collections.

The University of New Orleans, Center for Hazards Assessment, Response and Technology (UNO-CHART) www.chart.uno.edu



The Center for Hazards Assessment, Response & Technology at The University of New Orleans (UNO-CHART) is an applied social science research center that focuses on sustainability and resilience efforts and strategies in light of natural, technological, and environmental risks in the region and collaborations with similar programs across the country. Through its applied research projects, it fulfills its mission to assist residents, local and state officials, and communities in understanding and reducing risk to hazards.

UNO-CHART was founded in 2001 and is comprised of a multi-disciplinary group of faculty, staff, and Graduate Research Assistants representing various backgrounds including sociology, political science, public administration, planning, urban studies, engineering and geography. Currently, CHART has projects that address repetitive flood loss, disaster mitigation planning, community resilience assessments, storm mitigation efforts by coastal communities, community continuity, risk literacy, evacuation of vulnerable populations and resilience curriculum development.

CURRENT PROJECTS:

- The Socioeconomic Effects of the BP Deepwater Horizon Oil Spill on Gulf Coast Communities and Residents, 2010-2013 (Oxfam)
- Community Rating System User Group Support
- Mitigation Funding and Homeowner Assistance (Solutient)
- Blending Science and Traditional Ecological Knowledge (TEK) to Support Ecosystem Restoration (LA Office of Coastal Protection and Restoration)
- Community Education & Outreach Program (DHS-FEMA/GOHSEP)
 - Risk Literacy
 - * Community Continuity
 - * Disaster Resistant University Workshop
 - * Community Executive Risk Management
 - * Resilience Curriculum Development
- Repetitive Floodloss Reduction Project for the States of LA/TX Post Hurricane Katrina (FEMA)
- Reconsidering the "New Normal": Impact of Trauma on Urban Ecological and Social Diversity (NSF Subcontract to Tulane University)

SPECIAL THANKS

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- FEMA Region VI-Mitigation for assisting in the identification of speakers for the event;
- Natural Hazard Mitigation Association (NHMA) for assisting in the identification of speakers and for sharing Workshop information with its members;
- Denise Michelet, Brian Bruhn, Jr., and Brandi Gonzales with the Lindy Boggs International Conference Center for their assistance throughout the Workshop;
- UNO-CHART staff, graduate research assistants and student workers;
- local businesses—Aunt Sally's Pralines and Café du Monde—for generously donating raffle prizes;
- the Workshop speakers, presenters, and recorders; and
- the Music Department, College of Liberal Arts, The University of New Orleans, for providing reception entertainment.

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We also thank our sponsors for their generous support of UNO-CHART and its mission.

Notes

Notes

The detailed agenda, PowerPoint presentations, and session notes from the 2013 Disaster Resistant Universities Workshop—Linking Mitigation and Resilience, will be available online at the Earl K. Long Library Website, ScholarWorks@UNO (http://scholarworks.uno.edu).

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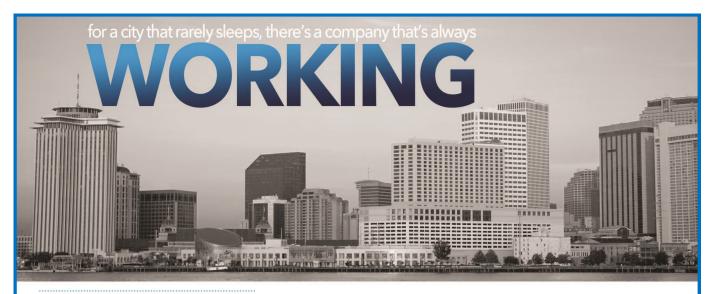
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