On September 13 2001, Tricia Wachtendorf and James Kendra traveled to New York City to begin a comprehensive study of the multi-organizational response to the 9/11 disaster. Working with Kathleen Tierney, principal investigator of that initial study, and with funding from the National Science Foundation, the Public Entity Risk Institute, and the Multidisciplinary Center for Earthquake Engineering Research, Wachtendorf and Kendra became particularly interested in the levels of improvisation and creativity that were being employed in the response.

One often-overlooked improvised episode of the response stood out for the two researchers: the unplanned but successful waterborne evacuation of hundreds of thousands of commuters and residents from Lower Manhattan.

In 2005, Dr. Wachtendorf and Dr. Kendra secured support from the National Science Foundation and the University of Delaware Research Foundation to study this important event. The South Street Seaport Museum has also been instrumental in providing access to its oral history documents.

The boat lift began before the collapse of the Twin Towers, as some ferry captains arriving in Manhattan turned around with their passengers rather than disembark them, while others picked up people who had reached the waterfront early in the emergency. As the emergency developed, people evacuating from the Trade Center area traveled on foot in all directions: some uptown; some eastward over the Brooklyn Bridge; others south and west, where they were brought up short at the waterfront.

According to Wachtendorf, "In response to the emerging need for transportation, boats of all descriptions converged on Manhattan. Some acted quite independently. Others sought permission from the Coast Guard, who initially instructed vessels first to stand by, then to position themselves in readiness before issuing its request for all available boats to participate in the evacuation." A varied pattern of activities developed. Some boat operators proceeded according to their best judgment while others acted under the guidance of Coast Guard personnel or harbor pilots. As multiple boat operators worked out the details of picking up passengers, a landward support network developed. According to Kendra, “Waterfront workers and maritime personnel directed passengers to an appropriate area where they might find a boat to take them to a destination close to home or to where they might find other transportation.” At the same
**Cover story continued**

time, a boat-lift operation emerged and vessels involved in the evacuation began transporting supplies, equipment, and emergency personnel to the city.

**This project** examines organizational improvisation and sense-making under conditions of rapid change and urgent needs for decision and action. The focus is on multiple organizations that are geographically dispersed yet nevertheless able to “make sense” with each other regarding swiftly developing emergency needs. Moreover, it explores how these organizations are able to coordinate their actions both responsively and productively.

**WHY IS THE WATERBORNE EVACUATION PROJECT IMPORTANT?**

“We just did what we needed to do……”

This is statement is echoed by many of those who played a critical role in evacuating residents and commuters from Lower Manhattan after the Twin Towers were attacked and collapsed. Yet, we believe that there is much more to the activities that took place that day. Indeed, this unplanned for evacuation points to the important role that citizens play in disaster response. It also, we hope, will help us better understand how people improvise in a disaster and how people can improvise effectively. Not only did those who participate in the evacuation perform a public service for those who were fleeing Ground Zero on September 11th, 2001, but they also have much to contribute to helping us make our community response systems more resilient to future disasters. In fact, a recent report distributed by the National Academies called for more research on how societies complement planned responses with those that are improvised. This study addresses these very issues recommended by the National Academies Committee on Disaster Research in the Social Sciences.

As we launch the first issue of the Disaster Research Report: Studying the 9/11 Waterborne Evacuation, we would like to share with you our vision for what we would like this newsletter to become. First and foremost, we would like to use this newsletter as an ongoing opportunity to thank those who participated in the safe evacuation of more than a half-million people from Lower Manhattan on September 11, 2001. In the past year, we have been conducting interviews with members of the harbor community and have been humbled by their willingness to assist us and share their experiences.

Second, we hope that the Disaster Research Report will provide you with information about our study of the evacuation and findings as the project progresses. Those who participate in a research study may wonder what happens once they’ve devoted their time. We want to keep you informed of the outcomes of your contribution, whether through student involvement, findings developed, or presentations to policy makers and practitioners.

Finally, as our distribution list continues to expand - we currently have over 100 subscribers - we hope to further connect the harbor community and the emergency management community. We are committed to providing you with interesting and relevant content that helps you gain a better understanding of current issues and upcoming events in the New York/New Jersey harbor area as well as those in the emergency management field. If you have an upcoming meeting, activity or event that would be of interest, please do not hesitate to contact us. We also welcome from the harbor community ideas, photographs, and stories that you would like to see in upcoming newsletters.

For those who have participated in the study, we thank you for your valuable contribution to our ongoing understanding of the evacuation. For those yet to meet, we look forward to an opportunity to talk with you in the future.

To subscribe to this newsletter, send us an email at twachten@udel.edu. We will also post newsletters at the project website: http://copland.udel.edu/~twachten/waterborne_evacuation.html

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**IMPROVISING DISASTER IN THE CITY OF JAZZ: A LOOK AT KATRINA AND 9/11**

Shortly after Hurricane Katrina devastated the Gulf Coast, Wachtendorf and Kendra were invited by the Social Science Research Council to write an essay examining the disaster response. In Improvising Disaster in the City of Jazz: Organizational Response to Hurricane Katrina, they examine improvisation (and sometimes lack thereof) during the event and also draw upon examples from 9/11 — including the waterborne evacuation — to highlight several key lessons, including the need to foster “learning organizations” that have the collective ability to assess and interpret new circumstances and adapt to emergent needs. The essay can be accessed in full at:

http://understandingkatrina.ssrc.org/Wachtendorf_Kendra/

NEW YORK (Sept. 11, 2001) New Yorkers rushed to the Lower Manhattan waterfront at Battery Park to try to escape the collapse of the World Trade Center towers September 11. They were later evacuated by ferries and tugboats from all over New York harbor. USCG photo by Chief Brandon Brewer. The U.S. Coast Guard Imagery Server is provided as a public service by the Office of Assistant Commandant for Governmental and Public Affairs.
SOUTH STREET SEAPORT MUSEUM: THE EVACUATION RETOLD

The South Street Seaport Museum’s exhibition “All Available Boats: Harbor Voices & Images 9.11.01” was on display at the Seamen’s Church Institute from May 22 - September 30, 2006. The exhibition highlights the harbor community’s response to the 9/11 attacks. Taped words and photographs of several participants involved in the waterborne evacuation serve as a powerful tool to describe the events of that day from the perspective of New York’s waterfront workers. If you missed the exhibit, the South Street Seaport Museum hosts a virtual exhibit at:
http://www.southstseaport.org/world.port/911exhibit.shtm

TALK AT NATO WORKSHOP FOCUSES ON THE WATERBORNE EVACUATION

On September 8-9, 2006, James Kendra was invited to highlight the waterborne evacuation at the NATO Advanced Research Workshop on Understanding and Responding to Terrorism: A Multi-Dimensional Approach.

This event was held in Washington, DC as a means to bring together distinguished participants from academia and law enforcement in order to better identify terrorism threats, to advance cooperation levels, and to explore workable ways to counter terrorism. The presentation, coauthored with Tricia Wachtendorf, was entitled “Improvisation and the Art of Emergency Management.”

NEW YORK, New York (Sept. 11)--Coast Guard crewmembers patrol the harbor after the collapse of the World Trade Center. Terrorists hijacked four commercial jets and then crashed them into the World Trade Center in New York, the Pentagon and the Pennsylvania countryside. USCG photo by PA3 Tom Sperduto. The U.S. Coast Guard Imagery Server is provided as a public service by the Office of Assistant Commandant for Governmental and Public Affairs.

UNDERGRADUATE INVOLVEMENT: SCOTT GOLDEN AND IMPROVISATION

UD Undergraduate Scott Golden presented “The Role of Key Players on Organizational Improvisation During Sudden Crisis: A Case Study of the September 11th, 2001, Waterborne Evacuation of Lower Manhattan” at the University of Puerto Rico Mayaguez Campus Undergraduate Research Symposium XIV on April 20th, 2006.

The Disaster Research Center (DRC) at the University of Delaware has established a three-year Research Experience for Undergraduates’ (REU) program to engage 10 undergraduate students each year in hands-on research training to enhance their understanding of the social science aspects of disasters. Over nine weeks, students are exposed to several course modules, including: research methods most frequently used in the study of hazards and disasters; theoretical social science approaches to understanding the causes and consequences of disasters; and the ethical implications of disaster research. In 2005, Scott Golden was chosen as an REU Fellow as well as a UD Social Science Summer Scholar to work with Tricia Wachtendorf on the waterborne study.

Project Team Members

Principal Investigators: Tricia Wachtendorf and James Kendra  Senior Personnel: Jasmin Ruback
Researchers: John Barnshaw, Brandi Lea, Lynn Letukas, and Bethany Brown
Undergraduate Research Aids: Jeffrey Engle, Caroline Williams, Lauren Ross, and Chris Colindres
**MEET THE RESEARCH CREW: DR. JAMES KENDRA**

Dr. James Kendra is an assistant professor of public administration and the Program Coordinator for the Emergency Administration and Planning Program at the University of North Texas. Founded in 1983, this was the first undergraduate emergency management program in the US. Jim has been at UNT since 2003, after working several years at the University of Delaware Disaster Research Center.

His research emphasizes how individuals and organizations respond to risk and hazard but, like many disaster researchers, he came into the field more by chance than by planning. After graduating from Massachusetts Maritime Academy, he shipped out for several years before going ashore to get a master's degree in geography at the University of Massachusetts. His focus was land use planning and seaport development which included study of management of coastal hazards, both natural and industrial. In going on for a Ph.D., Jim focused more on technical and industrial risks, and in his dissertation examined how new technologies such as GPS affected how mariners managed operational risks aboard ship. Jim shipped out during graduate school and holds a master's license.

Look for future issues to highlight other researchers involved with this study.

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**DID YOU KNOW...?**

Did you know that the Natural Hazards Center at the University of Colorado—Boulder sponsors a free electronic newsletter on disasters? Supported by the National Science Foundation, the newsletter updates readers with the latest news on research, funding, job postings, conferences, reports, and legislation in the hazards, disasters, and emergency management fields. To subscribe, send this one-line command in the body of your email message to: listproc@lists.colorado.edu (do not include <>):

SUBSCRIBE HAZARDS <Your Name>

Did you know that the Natural Hazards Center also publishes a bimonthly printed newsletter, the "Natural Hazards Observer," which is free to by mail to subscribers within the United States? It can also be found on the Natural Hazards Center's Web site: http://www.colorado.edu/hazards/

Did you know that the Disaster Research Center has the largest collection of disaster related materials with over 55,000 items housed in the E. L. Quarantelli Resource Collection? Students, scholars, and practitioners from around the world visit DRC to make use of its library. For more information about the collection, contact the library coordinator—Pat Young—at pyoung@udel.edu

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**CONTACT US**

For more information about the Waterborne Evacuation Project

Phone: 302-831-1254 or 940-565-2213
Email: twachten@udel.edu or jmkendra@unt.edu

We are also on the Web: http://copland.udel.edu/~twachten/waterborne_evacuation.html

We would like to take this opportunity to thank all those who have taken time to participate in this project. Your contributions have been extremely helpful.