

Annual Report



August 31, 2007

Dear Colleague,

The 2006—2007 grant year brought the USC-CPHP some terrific opportunities for growth. I want you, as a friend of the Center, to know a few of the highlights of what we have accomplished.

The USC-CPHP has been able to:

- ▶ Refine and streamline our unique team-based training approach
- ▶ Continue to build and broaden our partnerships
- ▶ Collaborate with a new colleague, Abe Wandersman, PhD, from the USC Department of Psychology, whose signature planning model, “Getting to Outcomes,” was adapted by our staff to support emergency preparedness planning
- ▶ Train and network with a new set of regional, multi-jurisdictional and multi-disciplinary preparedness teams that attended the 2007 Academy for Public Health Emergency Preparedness
- ▶ Develop a new curriculum and use it to provide training for behavioral health teams preparing to respond to emergencies in the state
- ▶ Expand our project for amateur (*ham*) radio operators into four distinct ham projects (*training new operators, developing Radio Response Teams, building infrastructure, and supporting preparedness exercises*)
- ▶ Intensify collaboration supporting our Coastal Workshop project to take it to a new level in the coming year — don’t miss the feature highlighting our partnership with nationally-recognized coastal environmental toxicologist, Geoff Scott, PhD
- ▶ Provide training for Arizona’s public health officials who requested guidance exploring the ethical dilemmas they would confront in all-hazards events.

Please enjoy the report, and feel free to contact me for further information. We are proud of the efforts of our dedicated staff and our determination to stay true to our mission, promoting emergency preparedness by building public health capacity and strengthening public health systems through development and use of evidence-based practices.

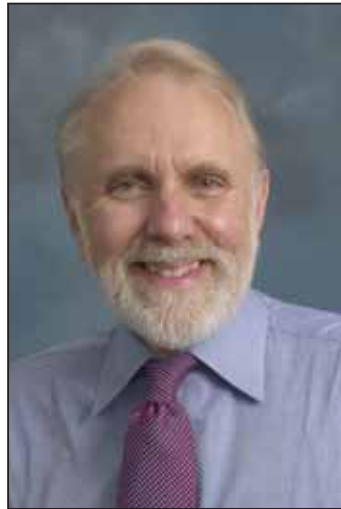
Sincerely,


Jane Richter



**Jane V. E. Richter, DrPH,
MSN, RN, CHES**
Director, USC-CPHP

Investigators



Charles E. Feigley, PhD, CIH
Principal Investigator, USC-CPHP
Professor of Environmental Health Sciences
Arnold School of Public Health

Emphasis on public health's role in emergency preparedness has never been more important - the menace of terrorism continues, abroad and within our own borders. And day to day, other public health emergencies continue to make demands on our communities.

The USC Center for Public Health Preparedness (*USC-CPHP*) is making strong contributions to local, state, regional, tribal and national preparedness. The USC-CPHP, residing outside governmental public health agencies, is able to provide needed support to our state, regional and local health department partners that would not be possible or practical from within these agencies.

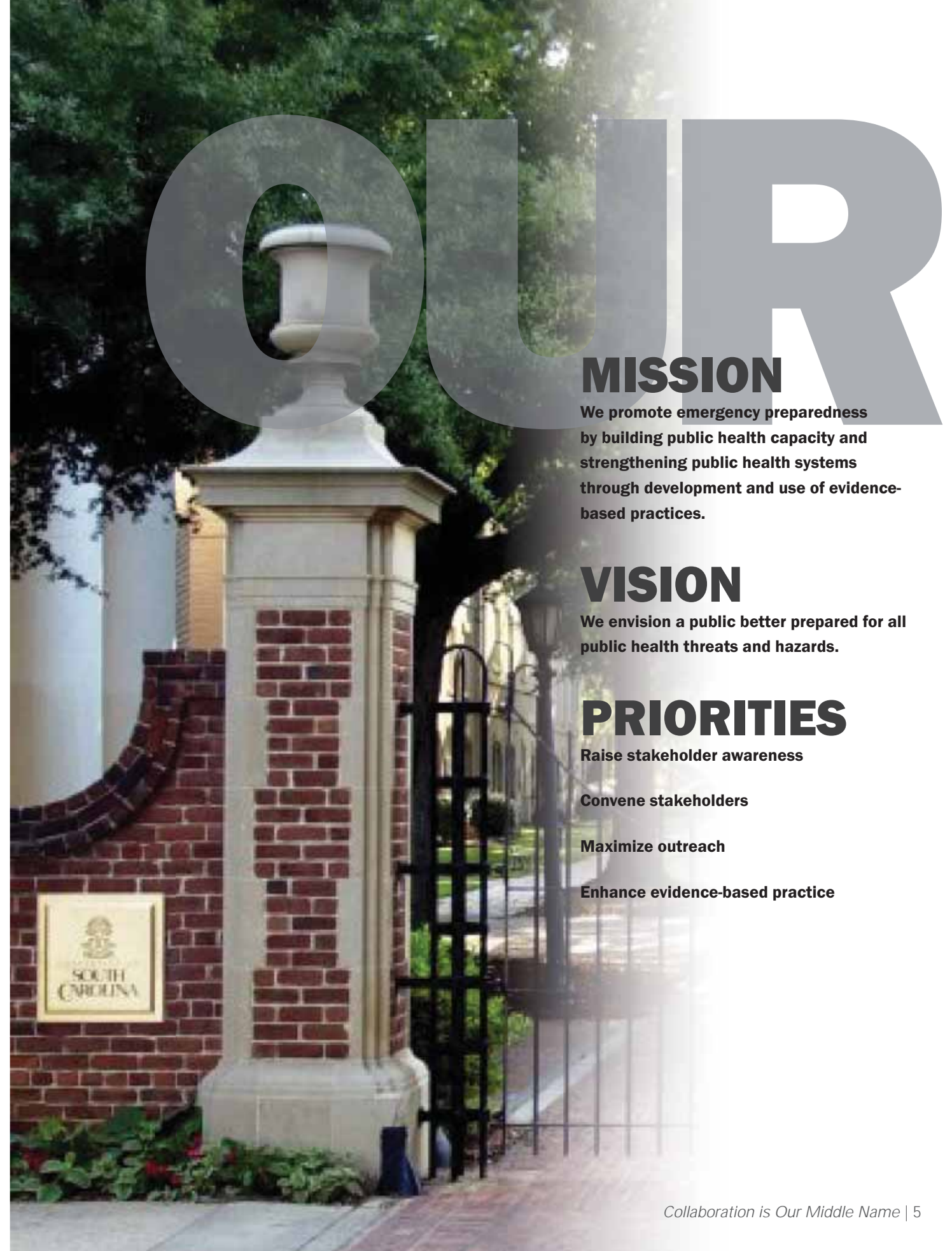
Despite our nation's best efforts to develop readiness over the last six years, we cannot declare "mission accomplished." Unlike our physical infrastructure, our human emergency response organizations require continuous attention, including training and exercising to maintain their ability to act rapidly and effectively in emergencies. In our Center activities, we continue to provide critically-important training for public health practitioners and their community partners (*including police, fire fighters, US Coast Guard, hospital workers, EMS, and other healthcare providers*) in a collaborative, problem-solving environment. The USC-CPHP works as one of those rare and effective bridges between practitioners and academics. Using our tools of extensive collaboration, continuous evaluation and quality improvement, we are improving preparedness for all hazards in South Carolina.



Donna L. Richter, EdD, FAAHB
Co-Principal Investigator, USC-CPHP
Dean, Arnold School of Public Health

The USC Center for Public Health Preparedness continues to work closely with the Arnold School of Public Health. Through the Arnold School, leadership, support, and direction are provided to campus efforts and statewide preparedness exercises in support of USC-CPHP activities.

The USC-CPHP has refined its unique team-based training approaches for public health professionals accompanied by their partners from many disciplines who come together to solve problems, thereby enhancing their communities' emergency preparedness and response structures. USC-CPHP's primary partner, the SC Department of Health and Environmental Control, is closely involved at both the state and local levels in almost every project the Center leads. That is why the USC-CPHP can continue to make "collaboration" its middle name.



MISSION

We promote emergency preparedness by building public health capacity and strengthening public health systems through development and use of evidence-based practices.

VISION

We envision a public better prepared for all public health threats and hazards.

PRIORITIES

Raise stakeholder awareness

Convene stakeholders

Maximize outreach

Enhance evidence-based practice



Team-Based Training

USC-CPHP has a unique approach to training which enhances the ability of front-line public health workers and their community partners to respond effectively and efficiently to all hazards. Multidisciplinary teams of stakeholders from each of the 8 Department of Health and Environmental Health (DHEC) Public Health Regions are invited to participate in a six-month workshop to develop team-based projects. These projects address priority needs identified by local emergency preparedness leaders. Participants attend training sessions which are structured to provide them with the tools necessary to complete their projects successfully.

TEAM-BASED TRAINING PURPOSE AND GOALS

The Center’s unique team-based approach is designed to strengthen individual, organizational, and inter-organizational capacity of public health and its community partners to address emergency preparedness issues. The ultimate goals of the team-based training approach are: enhanced public health emergency preparedness, workforce development, and systems change. The goals are pursued using the four elements below.

TEAM-BASED TRAINING ELEMENTS

1. Systematic Project Planning: Getting to Outcomes for Emergency Preparedness (GTO-EP)
 - ▶ Bases planning on 10 Results-Based Accountability Steps developed by Wandersman, et al.
 - ▶ Facilitates program planning, implementation, evaluation, and sustainability
 - ▶ Is adapted for emergency preparedness by USC-CPHP
2. Team Development: Building Team Infrastructure
 - ▶ Bases team development on models of team effectiveness
 - ▶ Addresses team structure and team processes
 - ▶ Includes didactic information and team building exercises
3. Content Expertise: Increasing Knowledge of Emergency Preparedness Issues
 - ▶ Provides keynote presentations by national experts
 - ▶ Provides access to local content experts
 - ▶ Provides review of team-based projects by Expert Panels
4. Technical Assistance: Facilitating Successful Project Completion
 - ▶ Trains staff pairs to form technical assistance teams assigned to 1, 2, or 3 teams of participants
 - ▶ Provides technical assistance during and between training sessions
 - ▶ Facilitates access to resources and provides ongoing feedback on team assignments

Team-Based Training: The Academy

Cohort 4 of The Academy was assembled to address state and local public health emergency preparedness needs. As in the past, we met with our state public health agency, the Department of Health and Environmental Control (DHEC) to determine how the USC-CPHP could assist them with needs they identified. Based on grant guidance, discussions with experts and evidence of existing gaps, we decided to concentrate on mass casualty planning topics for this year's Academy.



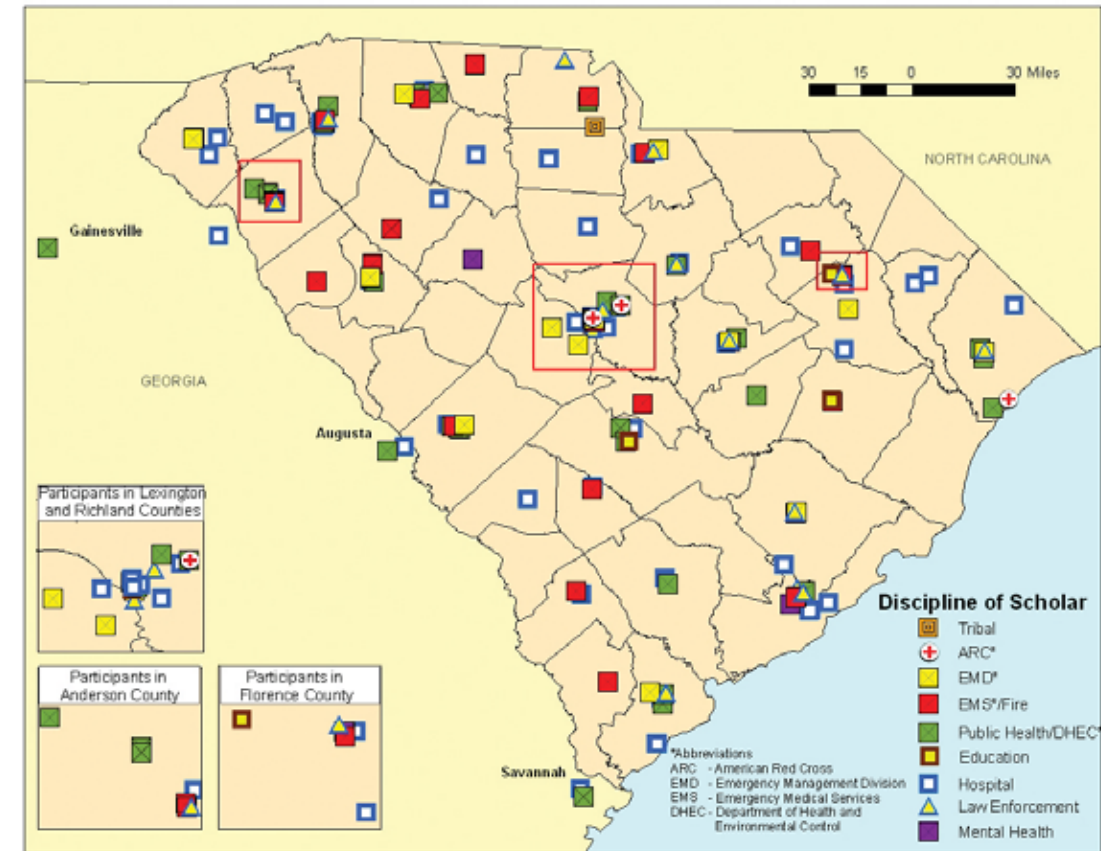
It's known as "The Academy."

The Academy for Public Health Emergency Preparedness invites multi-disciplinary teams to a six-month-long training experience that culminates in the presentation of a team-based project addressing a significant aspect of local emergency preparedness. Academy training provides teams with tools necessary to complete their projects successfully. Technical assistance/coaching are available from Center and DHEC staff throughout the project period.

Expert Panel members, chosen based on area of experience in the team's topic, provide feedback and make recommendations to improve the projects. The Expert Panel shown is reviewing the DHEC Region 2 project.

Audience members (shown in the background) are other teams waiting their turns to participate.

Team-based training at The Academy has created multi-jurisdictional, multi-disciplinary teams all across the state that serve their local communities' preparedness needs.



Academy teams are multidisciplinary and multi-jurisdictional, so they are able to reach across areas of the state. The Academy's reach continued to expand over the past four years, with 302 participants attending one of the four Cohorts of The Academy. The actual reach is significantly greater, however, because participants return to their communities, agencies and organizations to share the information and materials gained from our training with their professional networks. Participants' many disciplines are shown below, while their many locations are shown above (map).

Professionals from Many Disciplines Attended The Academy from 2004 to 2007:

public health professionals and students	physicians	emergency managers
management health information systems/data analysts	epidemiologists	law enforcement professionals
infection control/disease investigators	nurse managers	fire professionals
bioterrorism coordinators	health educators	safety officers/security managers
environmental scientists	veterinarians	mental health counselors
law/judicial/attorneys	hospital administration	social workers
public information professionals	hospital staff	substance abuse professionals
administrative/business professionals	occupational safety & health specialists	emergency medical services (EMS)

Impact of The Academy

Academy participant surveys are conducted to measure process and outcome results: training effectiveness, trainee satisfaction, benefits and challenges of attending, networking and relationship building, improvement of communication, coordination and collaboration among participating agencies within Academy teams. As a result, we are able to determine the short-term impact that The Academy has had on the participants and their teams, organizations and agencies. The majority of the participants report that they are satisfied with all aspects of the training, including the content presented, the technical assistance provided, and the overall quality of the training.

With our emphasis on team building and networking, it is no surprise that over 97% of the participants report that the training enhanced networking and relationship building within and across teams.

The USC-CPHP will continue to use Academy participants' suggestions and feedback to improve the process and structure of our team-based trainings to strengthen community emergency response.

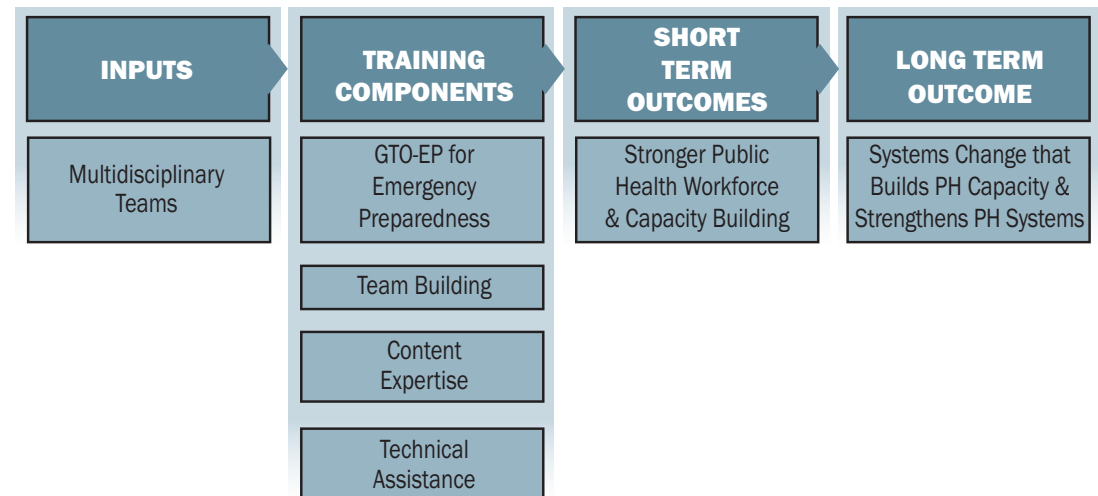


Expert Panel Members agree to review team projects before they attend their team's presentation at the final Academy session. (DHEC Central Office team and Expert Panel members are shown above).

Teams make formal presentations that are followed by Expert Panel members' questions and comments. Teams then receive recommendations for changes and improvements to their final projects.

USC-CPHP Team-Based Training Systems Change Model

Our systems change model (*see below*), begins with the "inputs," or existing resources, which are the teams for The Academy. The teams receive the intervention, consisting of Academy training components. Our training outcomes are what we hope to achieve as a result of the training. The short term outcomes occur during or soon after the training, and long term outcomes are the changes that occur over a longer period of time, and can change the way systems function. The amount of learning transfer determines the quality and quantity of systems change.



Team-Based Training: Behavioral Health Teams

Why should communities have behavioral health teams?

It is often said that all disasters are “local.” Disasters affect the social fabric and equilibrium of communities in which they occur, and community members are highly vulnerable to individual trauma and stress reactions. The severity, size, and complexity of an event dictate how much and how long a community will be impacted. Social supports and structures that can aid in response to disasters protect a community’s emotional and behavioral health. Behavioral health teams



The Behavioral Health Team from DHEC Region 4, along with Academy technical assistants **Donna Rowe** (far left, DHEC) and **Bill Dease** (far right, USC-CPHP) assembled for a “photo op” after completing team-based training with Cohort 4 of The Academy.

can be an important source of social support, and are an invaluable piece of a community’s emergency preparedness and response structure.

Communities that develop and maintain behavioral health teams have a significant advantage when psychosocial services are needed immediately, during, or after a disaster. Having teams already in place during these times of emergency

ensures that there is no delay in the provision of needed services. Local behavioral health teams can provide effective and efficient psychosocial care to those impacted, helping to restore a sense of stability and normalcy in their communities.

The USC-CPHP is developing a guide to be used at the regional or county level, with the understanding that the behavioral health infrastructure may be different for each team.

Ham Radio Is A Crucial Link in Emergencies

SC Emergency Management Division Turned to USC-CPHP for Assistance

In 2004, SC Emergency Management Division (SCEMD) approached the University of South Carolina Center for Public Health Preparedness (USC-CPHP) for help in recruiting and training amateur (*ham*) radio operators to “man” the radios in emergency operations centers around the state supporting local hospital emergency management communications. Charlie Miller, South Carolina’s Amateur Radio Emergency Services (ARES) Area Coordinator, offered his partnership and has worked with the Center ever since, building interest and momentum for emergency communications support throughout the state.

The Center convened the USC Ham Coordinating Committee (UHCC) to channel the planning expertise and passion of other enthusiastic ham radio stakeholders who joined the project. Center staff and Charlie began collaborations with emergency communications experts from the Medical University of South Carolina (MUSC), the preparedness coordinator for the SC Hospital Association (SCHHA), and preparedness staff from DHEC and SCEMD. As additional members signed on to help broaden the UHCC, impressive accomplishments started building more quickly.

A Little HEART History

In 2005, a local group of ham radio operators and engineers at the MUSC raised concern that coastal areas needed a viable backup communications system to support hospitals during major disasters; in response, they conceived their Hospital Emergency Amateur Radio Team (HEART) project. In emergencies, when routine types of communications are lost, HEART is dedicated to hospital and healthcare emergency traffic, facilitating their communication with first responders, the American Red Cross, and local governmental agencies, allowing them to coordinate patient transport and manage facility evacuations. The HEART system is regulated by FCC rules, and HEART is available for local hams on a routine basis. The success of the HEART system led the UHCC to start developing a similar system to support health and medical emergency communications statewide.

Volunteers Needed Funding to Enlarge HEART

Amateur (*ham*) radio communications are provided strictly by volunteers – FCC regulations forbid using ham radio airwaves to make money. However, volunteers found travel and training costs were often barriers to full participation in training, drills and exercises. HEART approached the UHCC for funding to support their participation and the system’s growth. After discussion and collaboration among the UHCC members, the USC-CPHP provided funding to support training of new operators. UHCC member organizations began to strategize ways to leverage additional funds to ensure participation and purchase equipment needed to build infrastructure.

Thus, the USC-CPHP’s support of the UHCC has facilitated their foresight and advocacy, growth and collaboration, to build a new, statewide redundant communications system for emergency response to hospitals and healthcare organizations -- the SCHEART Project.



When all else fails, amateur (ham) radio proves to be the only means of communication still standing.

Our Four-Pronged Approach to Communications Readiness

What began in 2004 as a simple request for training assistance has evolved into four projects supporting a statewide redundant communications system for healthcare emergencies in the state. The USC-CPHP provides direction and support. We are involved in the following services:

1. **Conducting and supporting state and local ham radio training/licensing classes** — to meet the demand for training across the state, we have progressed from one-on-one trainings to satellite broadcasts at regional locations, and will soon go to a library-style system where we will provide books, video-based training and on-site *Elmers* (skilled ham radio trainers) to help students prepare for testing.
2. **Training and recruiting operators for Radio Response Teams (RRTs)** to support over sixty-five hospitals and healthcare facilities during drills, exercises, and real-life disasters.
3. **Supporting infrastructure building and providing assessments of equipment needs for healthcare facilities** in partnership with the ARES organization and local ham radio operators.
 - ▶ The USC-CPHP has established and supported the UHCC to build capacity within the public health community and organizational infrastructure for SCHEART.
 - ▶ The USC-CPHP has participated in the SCHEART Group's work by encouraging relationships among collaborators to create the hardware infrastructure necessary for the statewide network.
 - ▶ The USC-CPHP participates in providing specific recommendations for hospital/healthcare facilities, based on their needs, to purchase and install ham radio equipment needed to access the network.
4. **Planning, conducting and evaluating communications training exercises** that involve hospitals and healthcare facilities, in order to test the SCHEART network response system.

Million\$ Leveraged through Partnerships

Through its partnerships, the Center-supported UHCC has leveraged about \$4 million dollars in expertise and equipment necessary to design, build and maintain the statewide network of repeaters that supports SCHEART. Funding through DHEC from the Health Resources and Services Administration allowed hospitals to purchase amateur radio equipment. South Carolina Educational Television built out the repeaters linking the hospitals and healthcare facilities across the state. The SC Hospital Association adds synergy to these efforts by brokering relationships and by advocating for this project in order to increase its visibility and credibility.

Infrastructure Project Completed Three Years Ahead of Schedule

The backbone of the SCHEART infrastructure consists of a series of repeaters strategically located at broadcast and microwave towers in each region of the state that are built, owned and operated by SCETV. Each SCETV site is equipped with backup generators and has its own tanks and trucks to provide emergency fuel supplies. In addition, SCETV has agreed to provide maintenance for the life of the system.

Completion of the SCHEART communications infrastructure was originally a five-year goal. As a result of this very successful UHCC collaboration, the infrastructure (*hardware*) supporting SCHEART will go live in the fall of 2007, in time for the busiest part of hurricane season — three years ahead of the original target date for completion.

SCHEART Built On Disaster Lessons Learned

We have all learned from 9/11, hurricanes Katrina, Wilma, and Rita, and other disaster/mass casualty events that when all else fails, amateur (*ham*) radio has proven to be the only means of communication still standing. Building on lessons learned from these and other major disasters, state and federal agencies are currently making redundant communications “priority one.” In our state, the SCHEART project is designed to provide backup support for the Palmetto 800 MHz system and other devices (*cell phones and satellite radios*) under Emergency Support Function #8 (*ESF-8*): Health and Medical Services.



Operator KI4PKO (*Bill Dease*) coordinates the back-up communications support in the State Emergency Operations Center (*SEOC*) before directing ham radio traffic to support a statewide exercise.

Port security is enhanced by critical linkages among public health and first-responder organizations

2007 Coastal Workshop Brings Port Stakeholders Together To:

- ▶ Become adept at using National Response Plan target capabilities planning as explained and illustrated by Marcus Pollock, keynote speaker from the US Department of Homeland Security (*DHS*). Mr. Pollock is a Program Specialist at the Preparedness Directorate, National Preparedness Task Force (*photo, mid-page at left*);
- ▶ Discover powerful response and recovery lessons for the business community. Charles H. Van Rysselberge, CCE, spearheaded business recovery efforts that started the day of the Oklahoma City bombing, with mobilization support from a multitude of community partners;
- ▶ Recognize the law enforcement emergency response and recovery strategies implemented during Hurricanes Katrina and Rita, where the scale of the disaster and its persistence required sustained responses. Baton Rouge Police Department Homeland Security Emergency Operations Liaison Sgt. Michael Murphy shared details; and
- ▶ Engage local media leaders, responsible for on-air and behind-the-scenes risk and crisis communication, asking them to join local skill building training for reporting responses to and recovery from all hazards.



Marcus Pollock, DHS' representative to the Coastal Workshop, offered his assistance during the entire workshop, in addition to providing the keynote address. Coastal leaders were introduced to the guidance and tools that define and assess national preparedness, including: the Target Capabilities List, the Universal Task List, and the National Preparedness System.



Local public health, port security and media experts heard panel members exchange lessons learned from major disasters that provided critical, instructive examples. Panelists from left to right are: **Rick Foster**, MD, Senior Vice President for Quality and Patient Safety, South Carolina Hospital Association; **Michael Murphy**, LEM, Homeland Security Manager for the Baton Rouge Police Department; **Charles H. Van Rysselberge**, CCE, President and CEO, Charleston Metro Chamber of Commerce; and **Colin Okada**, PhD, Senior Scientist, Crisis Response Section, at the Department of Energy's Remote Sensing Laboratory in Las Vegas, Nevada.

Personal Profile: Key Partner Works to Improve Coastal Security

Advisor for Coastal Workshop

For the last 4 years, the USC-CPHP has been lucky, indeed, to have behind-the-scenes leadership and guidance on scenario building and scientific accuracy in the months preceding each Coastal Workshop.

Geoffrey I. Scott, PhD, is an environmental toxicologist with special areas of expertise: the ecotoxicology of water chlorination products; urban nonpoint source pollutants, and pesticides; and public health aspects of environmental sanitation in surface waters and seafood. Dr. Scott is director of NOAA's National Centers for Coastal Ocean Science's Center for Coastal Environmental Health and Bio-molecular Research (*CCEHBR*) in Charleston, South Carolina, as well as the Oxford Cooperative Laboratory branch in Oxford, Maryland. Both Dr. Scott and Dr. John Miglarese, his collaborator at CCEHBR, have worked diligently with USC-CPHP staff in developing Coastal Workshop scenarios and support materials.

Dr. Scott is a front-line veteran of numerous environmental disasters, including many oil spills: the AMOCO CADIZ, PECK SLIP and IXTOX I WELL Blow Out, some of the most expensive man-made spills in US history. Dr. Scott is a distinguished scientist, a Tenured Associate Professor at the Arnold School of Public Health at the University of South Carolina, and is also: an Associate Professor at the Medical University of South Carolina's Marine Biomedicine Program; Adjunct Associate Professor, The Institute of Human and Environmental Health, Texas Tech University, Lubbock, TX; and Associate Adjunct Professor in the Marine Biology Program at the University of Charleston. Dr. Scott also has been invited to share his expertise with government and industry advisory panels on numerous occasions.

NOAA and the U.S. Department of Energy's Savannah River National Laboratory (*SRNL*) have just signed a new Memorandum of Agreement for Collaborations on Maritime Homeland Security. Dr. Scott and Dr. Michael Heitkamp of SRNL were instrumental in getting this agreement signed and have both worked very hard to support on-going activities of USC's Center for Public Health Preparedness' Coastal Workshops. Indeed, the new Environmental Surveillance Network (*see next page*) was an outgrowth of the third Coastal Workshop. Dr. Scott has also directly supported the Greater Charleston Chamber of Commerce's ThinkTEC's efforts (*Pennie Bingham*) in developing homeland security commerce within the port of Charleston by supporting ThinkTEC's annual Homeland Security Innovation Conference, which showcases Charleston as a model community for partnerships between and among public/private organizations and innovative homeland security initiatives.



Geoff Scott
"Seeing an existing fish kill helps us recognize a sentinel environmental event," says well-known national leader in coastal environmental toxicology, Geoff Scott, PhD, one of the Center's steadfast, behind-the-scenes authorities who helps develop the Coastal Workshops.

New Environmental Surveillance Network

Dead fish, dead birds, harmful algal blooms or stranded marine animals indicate something has gone awry in our air or water, causing a biological response. The use of fish kill data as a low-tech, yet very cost effective means to detect environmental threats, may well become a new and novel first-line sensor of a homeland security breach that can be monitored in almost real time. Dr. Scott's work has national security implications, and is attracting international attention.

From Canaries to Fish Kills

Long ago, coal miners employed a simple method to detect presence of a potential hazard: the canary in the coal mine. Before the agent reached lethality to humans, the small canary would fall off his perch, signaling presence of an agent in the environment that humans needed identify and locate. Similarly, if opportunistic birds dine on a fish kill and subsequently sicken or die, their deaths flash an environmental warning. The vast majority of documented fish kills are the result of natural occurrences, primarily from low dissolved oxygen (*D.O.*) levels in the water.

“Bird or marine mammal people don't usually talk to fish people,” says Dr. Scott, indicating a need for regular monitoring and sharing of information in order to detect and react appropriately to any threat aimed at us through biological or chemical terrorism, industrial accident or natural causes. Most states already monitor these data — but finding a method for organizing and conveying data to other scientists in a timely manner lags behind. With Dr. Scott's leadership, NOAA (*Wayne McFee*) is collaborating with NOAA's National Coastal Data Developmental Center (*NCDDC - Scott Cross*), the SC Department of Health and Environmental Control (*DHEC - Jim Rice*), the Arnold School of Public Health (*Kevin Kirkwood*), and SC Department of Natural Resources (*DNR - Susan Wilde*) to establish an Environmental Surveillance Network that:

- ▶ gathers and shares data organized to fit appropriately into an extensive list of environmental

risk categories and be reported with the data's geographical coordinates, in nearly real time;

- ▶ interfaces with a national system when it is established; and
- ▶ leads the way towards developing a national environmental surveillance template to be used by all 50 states.

The value of such a system to environmental safety, emergency response and homeland security is obvious — and it need not be expensive. Through NCDCC and CCEHBR's Harmful Algal Bloom and Analytical Response Branch's Southeastern Phytoplankton Monitoring Network (*SEPMN*), high school and college students, non-governmental organizations and volunteers are already working in the field, monitoring and collecting samples of phytoplankton for identification of species that may potentially cause harmful algal blooms.

SEPMN began in South Carolina and has spread to include AL, FL, GA, HA, MA, NC, TX, and the Virgin Islands. Any identified harmful algal bloom (*HAB*) species is photographed under a microscope and the digital image is sent to CCEHBR, where Dr. Steve Morton, the Director of the SEPMN, makes positive identification and results are posted on the web site (<http://www.ncddc.NOAA.gov/website/SEPMN/viewer.htm>). This may, in turn, result in activation of CCEHBR's Analytical Response Team to collect and analyze additional data and samples to determine if the *HAB* phytoplankton species is indeed producing toxin that may impact environmental and human health. Data results from the network are in turn used with satellite data within the National Centers for Coastal Ocean Science to help better develop NOAA's *HAB* forecast for the Gulf of Mexico.

The Environmental Surveillance Network extends the approach SEPMN has used by bringing in additional data (*already being collected by state and federal scientists*) to integrate it into a near real-time broadcast alert format.

Health Officers Request Coaching in Ethics and Public Health in an Age of Terrorism

Arizona Local Health Officers' Association (*ALHOA*) invited the USC-CPHP ethics curriculum authors to meet with their membership in a retreat setting to explore and discuss the tough and practical issues of *Ethics and Public Health in an Age of Terrorism*. ALHOA members borrowed the retreat title from USC-CPHP's recent course and curriculum, written by Howard B. Radest, PhD, © 2006.



Soft lighting and hard questions focused on **Harvey Kayman, MD, MPH**, (*pictured left*) and **Jane Richter, DrPH, MSN, RN, CHES**, (*pictured below*) as they shared two challenging and thought-provoking days with Arizona public health officers at their annual retreat in Scottsdale, AZ. After this session, **Dr. Kayman** invited the audience to join him for further study and discussion when he teaches the full course, *Ethics and Public Health in an Age of Terrorism*, in the fall 2007 semester at the University of California, Berkeley.



Dr. Jane Richter (*right*) and **Krista Gunnoe** (*representative of Mohave County, AZ*) discuss public health practice issues during a break.

112 Arizona county public health directors, along with their management staff and supervisory staff, preparedness experts and practitioners spent two intense days with two of the curriculum's three developers. Co-author, Howard B. Radest, PhD, was unable to attend.

Harvey Kayman, MD, MPH, led the development and implementation of the ethics course at the Arnold School and co-authored the text while he served as both bureau chief of

Maternal Child Health Services at DHEC and adjunct faculty at the Arnold School. Dr. Kayman currently serves as Public Health Medical Officer III, Bioterrorism Planning and Preparedness Section, Immunization Branch, Division of Communicable Disease Control, California Department of Public Health.

Center director Jane Richter, DrPH, RN, MSN, CHES, brought forth discussion on the public health practice aspects of preparing for and making ethical decisions that each participant may face when pandemic influenza or other disasters strike.

Dean's Faculty Scholars Infuse Preparedness



Sarah B. Laditka, PhD, MA, MBA

MHA Program Director, Arnold School of Public Health
Associate Professor of Health Administration
Senior Research Affiliate, Office for the Study of Aging, and the South Carolina Rural Health Research Center

Dr. Laditka and co-investigators developed two modules. Module one brought small groups of doctoral students together to develop and present a class module for health administration master's students on disaster preparedness for older and/or disabled adults in the community, emphasizing ethical consideration. Evaluation results showed significant and meaningful improvement in students' perceptions of their learning in disaster preparedness for vulnerable groups, for frail elderly living in the community, and in their levels of confidence to develop and teach disaster preparedness to students of health administration.

Module two was designed and pilot tested in spring 2007 to teach master's students to apply basic principles of preparedness for complex disasters to strategic planning for a health care organization. Evaluation results were very positive for this module as well.



John Vena, PhD

Chair, Department of Epidemiology
Professor of Epidemiology, Arnold School of Public Health

Disaster Epidemiology and Public Health Preparedness modules for graduate students at the Arnold School's Department of Epidemiology and Biostatistics were developed and implemented by department chair John Vena, PhD, with the assistance of Erik Svendsen, PhD, a part-time USC-CPHP staff member and the State Environmental Epidemiologist. Dr. Svendsen is also a Research Assistant Professor in the department. The strategy for integrating disaster epidemiology and public health into the existing program was to incorporate content modules into the graduate curriculum and develop lectures in problem-based learning cases for such courses as Environmental Factors and Human Health, and Epidemiological Concepts in Selected Disease or Health Conditions.

This project also inventoried resources for use in such modules and drafted an outline for a course in Disaster Epidemiology.



Daniela B. Friedman, MSc, PhD

Assistant Professor
Department of Health Promotion, Education, and Behavior, Arnold School of Public Health

In August 2006, Dr. Friedman accepted an academic appointment at the Arnold School in health communication and health literacy as part of a Faculty Excellence Initiative cluster hire. Dr. John Besley (*School of Journalism and Mass Communications*) and Dr. Justin Weinberg (*Philosophy*), two of the co-investigators on the proposed project, were also part of this FEI cluster hire.

Dr. Friedman is leading the development of a curriculum module to address issues and strategies for communicating emergency preparedness information to limited-literacy populations. The team will explore concepts of plain-language risk communication, how cultural context informs the framing of health risk information, the impact of new technologies on the dissemination of health information, and key factors involved in the development and implementation of health communication campaigns.

The Center's Evaluation Philosophy

Evaluation is built into every USC-CPHP activity. We assess every project through comprehensive process and outcome evaluations. In addition, the strengths and weaknesses of the Center as well as progress towards its goals are evaluated annually. The Center's evaluation philosophy is rooted in empowerment and participatory evaluation models, with its primary purpose being continuous quality improvement of the Center and its activities. The quality of USC-CPHP trainings, partnerships, and products, as assessed by the Center's evaluation team, certainly attests to this.

Translational Research Application

One way to ensure that translation of research findings into public health practice is effectively achieved is through the use of models designed to bridge the research-practice gap. Our model includes the delivery of best practices combined with a customized planning process that is used by participants in our team-based training. During the intervention, public health professionals will develop familiarity with traditional first responder capabilities and vice-versa. As a result, public health not only reaches out to partners but also receives and embraces opportunities for teammates to jointly plan and exercise for emergencies. In addition, traditional first responders are transformed into public health extenders. For example, a law enforcement official who understands and accepts the reach of public health emergency health powers becomes a public health stakeholder capable of effectively enforcing isolation, quarantine, or security of the Strategic National Stockpile.

At the end of the training, participants will have increased their basic emergency preparedness knowledge, their understanding of team functioning and collaboration, and their use of systematic approaches to planning, implementing, and evaluating emergency preparedness strategies.

The Center's Ultimate Goal is Systems Change

Because USC-CPHP's ultimate goal is systems change, a specific systems change model was developed as part of the outcome evaluation (*see page 11*). The model allows the evaluation team to not only investigate the immediate impacts that the Center and its activities have on stakeholders, but also to assess the long-term changes in individuals, organizations, and communities that participate in Center activities.

Evaluators share evaluation results with USC-CPHP staff and training participants on a regular basis. Evaluation data and the discussions that are generated among key stakeholders guide the decision-making for next steps.

The evaluation team is committed not only to continuing to build the Center's evaluation capacity, but also to facilitating the development of quality programs and products. Evaluation tools are also utilized for purposes beyond evaluation, to include strategic planning and organizational development.



Current members of the USC-CPHP team, from left to right, are: Duncan Meyers, [front row] Geneva Currie, Joselyn Burdine, Karen Pendleton, Kathleen Leopard, Angie Kolovos, Bill Dease, [back row] Erik Svendsen, Danny Williams, Melanie Livet (absent).

USC-CPHP Team

Joselyn Burdine, MSPH, Coastal Project Coordinator

Geneva Currie, BS, Office Manager

William Dease, MA, IT and Ham Radio Initiative Coordinator

Kathleen Leopard, MPH, Communications and Ethics Project Coordinator

Melanie Livet, PhD, Assistant Director and Senior Evaluation Scientist (not pictured)

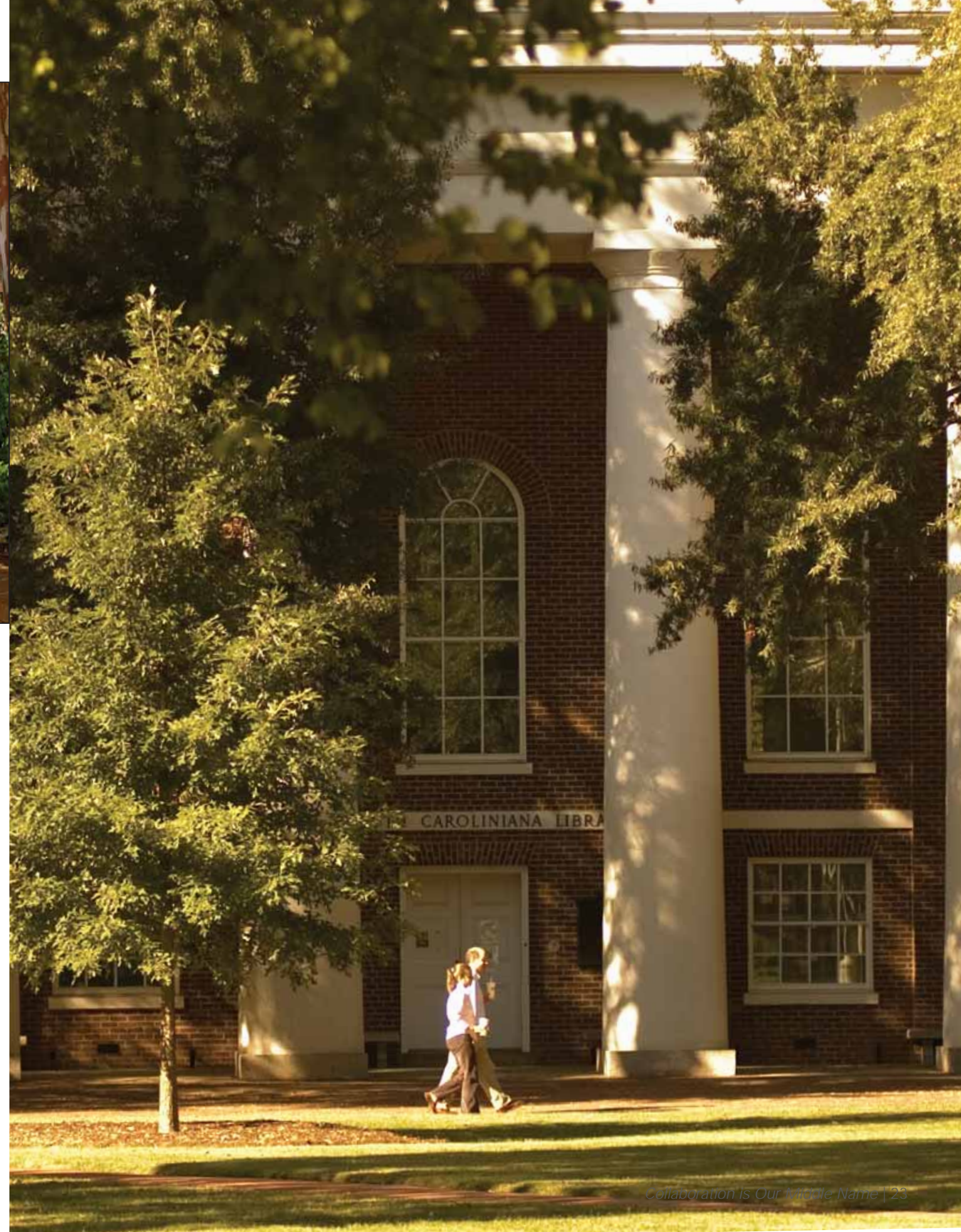
Karen Pendleton, MSPH, Evaluator and Academy Project Coordinator

Erik Svendsen, PhD, Environmental Epidemiologist

Danny Williams, AS, Communications Technician

Duncan Meyers, MA, Graduate Assistant

Angie Kolovos, BS, Graduate Assistant



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