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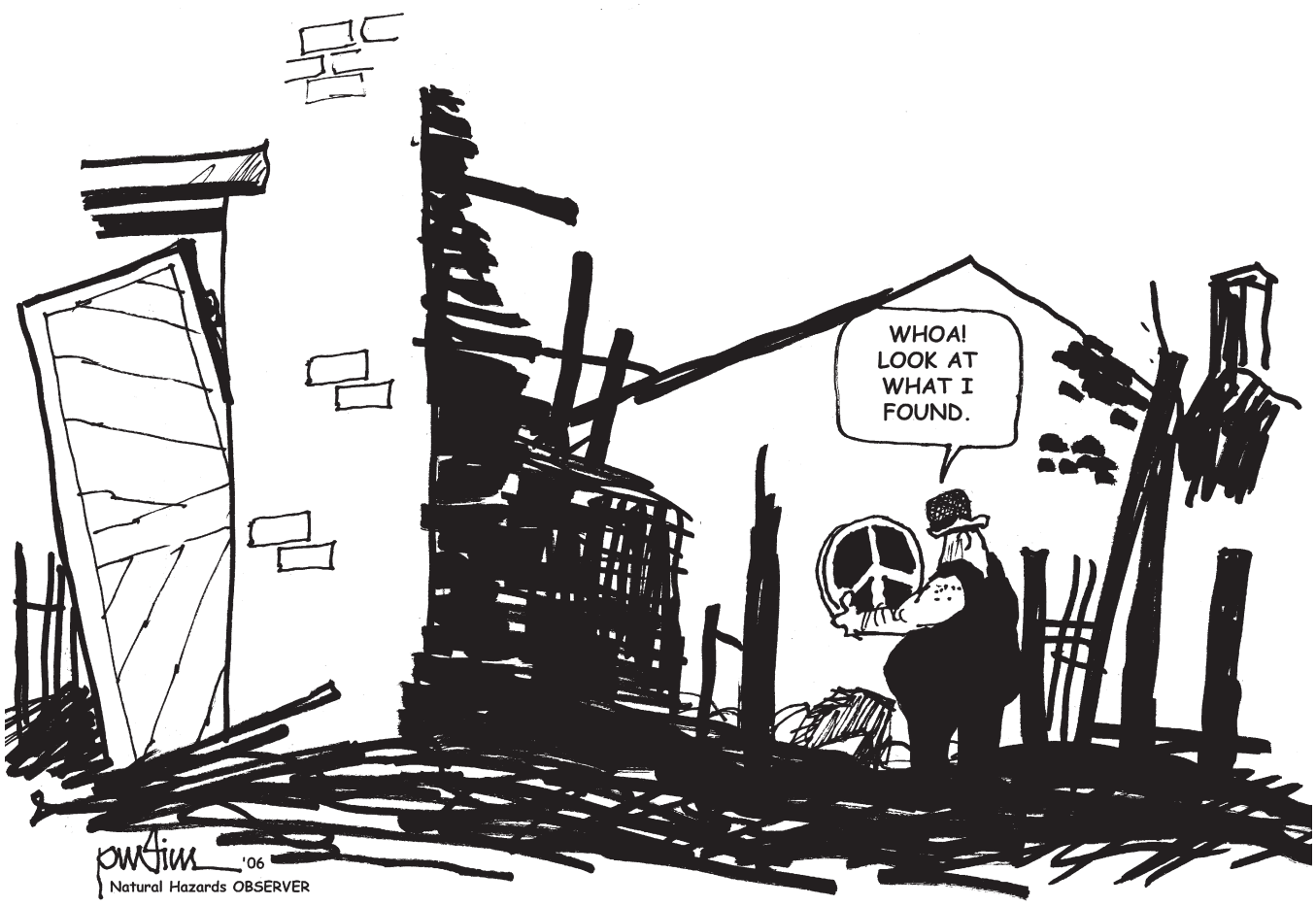


Fostering Peace in Postdisaster Regions

— an invited comment

Around the world, conflict zones are marked by devastation. Physical and emotional suffering is compounded in areas where disasters overlay existing violence. However, there sometimes exist unique circumstances in which disasters can bolster peacemaking opportunities. In this article, we examine how ongoing conflicts in Aceh and Sri Lanka changed following the December 2004 Indian Ocean tsunami, and how the October 2005 Kashmir earthquake affected the rocky relationship between Pakistan and India.

When Disaster and Conflict Intersect

A combination of human-related factors—including ecosystem destruction, climate change, population growth, and the growth of often poorly constructed human settlements in vulnerable and inappropriate areas—has set the stage for more frequent and devastating "unnatural" disasters: natural disturbances made worse by human activities. Human populations are straining against the environmental

safety net that has, until recently, offered them a measure of protection from the effects of natural disasters.

Disasters can undermine livelihoods, compromise the long-term habitability or economic viability of an affected area, and diminish human security in other ways. The outcome is determined not only by the severity of the disaster, but also by the timeliness and adequacy of relief and rebuilding programs and by the degree of resilience in affected communities.

Economic and ecological marginalization worsen the impacts of disasters on poor people and ethnic minorities. A disproportionate number of the world's poor live on the frontline of exposure to disasters: underdeveloped countries account for 53 percent of recorded disaster-related deaths even though they are home to only 11 percent of the people exposed to natural hazards worldwide.

In urban areas, poor people contend with precarious housing options, including slums. In rural areas, inequitable land distribution means that small farmers are often forced onto steep hillsides, where they are much more vulnerable to massive erosion and landslides. Since the coping capacity of poor people tends to be very limited, a disaster may push them over the edge economically.

When conflict areas are hit by disasters, as has been recently demonstrated, there is the potential for vastly different outcomes. Here we focus on three case studies: Aceh province in Indonesia, Pakistan/India, and Sri Lanka. Each area has experienced a catastrophic natural disaster within the past two years. Each is the site of existing violent conflict. And each has taken a distinctly unique path toward either peace or increased conflict since disaster struck.

Aceh: Peace at Last

When the catastrophic December 2004 Indian Ocean tsunami hit Indonesia, it killed almost 170,000 people in the province of Aceh—more than ten times the number that perished there in three decades of civil war—and triggered a fundamental change in attitudes, leading to successful peace negotiations between the Indonesian government and the Free Aceh Movement (GAM).

Implementation of the first phase of the August 2005 "memorandum of understanding" has been very successful. By December 2005, GAM fighters turned in their weapons, and the government withdrew nonterritorial military and police from Aceh. But, big challenges still lie ahead. Some provisions of the peace agreement remain controversial, such as how political parties and candidates may contest upcoming elections, and whether a new Human Rights Court will be able to try past human rights abuses.

Post-tsunami reconstruction has been agonizingly slow, marred by land and property disputes and corruption. Only about 16,000 houses, of a total 120,000 needed, were built by early 2006, leaving many survivors in tents and barracks. In March, 10,000 of the new houses were found to be so poorly built that they may need major repair.

Swift reconstruction and economic revival are essential to cementing peace in a province where 40 percent of the population lives in poverty and several thousand former GAM fighters need to find new livelihoods. Meanwhile, another threat to the tenuous peace is the focus placed almost exclusively on tsunami survivors at the expense of those displaced by the long conflict.

Aceh still faces significant challenges, but the desire for peace is strong. Although the end of conflict is not irreversible, the province stands a good chance of retaining its recent calm.

Kashmir: The Necessity of Political Courage

The massive tremor that struck northern Pakistan and Kashmir on October 8, 2005, cut through a fault line of conflict that has divided Pakistan and India for 58 years. With the death toll unofficially pegged at close to 90,000, the disaster inflicted greater suffering in a matter of minutes than that wrought by the last 16 years of conflict.

The postdisaster situation offered a unique opportunity to build trust and defuse the Kashmir conflict, and indeed, both governments made some promising overtures. Within two weeks of the disaster, India had delivered close to 300 tons of food, medicine, and tents to Pakistan, consented to let Pakistani helicopters operate in a no-fly zone along the border, and reestablished cross-border phone links severed nearly 16 years earlier.

The two governments also agreed to open five crossing points along the Kashmir "Line of Control" to facilitate cross-border relief and allow separated families to meet, but it took weeks before the first individuals were allowed passage. An Indian offer to have its army helicopters join search-and-rescue missions foundered because Pakistan refused to allow Indian pilots to fly the aircraft and India insisted on using its own crews.

India and Pakistan continue to gingerly move toward more normalized relations. They agreed to add a second cross-Kashmir bus service for families that live on both sides of the cease-fire line, augmenting the existing "peace bus" service that was launched with much fanfare in April 2005. (Elaborate security checks and stultifying bureaucracy have severely limited the number of people traveling.) Such moves indicate there is hope for Pakistan and India, but distrust and lack of visionary political leadership have turned a situation with the potential for a historic breakthrough into a timid and tightly circumscribed exercise.

Sri Lanka: Backsliding into Violence

Before the tsunami hit Sri Lanka, this island nation was tormented by a 20-year civil war that finally stalled with a fragile cease-fire in February 2002. The main conflict implicates the country's Sinhala majority and the Tamil minority, most notoriously the LTTE—the Liberation Tigers of Tamil Eelam. Both communities also suffer from deep and violent internal divides.

Despite initial enthusiasm, resumption of war had become a dreaded expectation by the time the tsunami struck due to questionable political leadership on both sides and the exclusion of several key constituencies from the peace process. The days immediately following the tsunami were marked by a groundswell of solidarity, spontaneous acts of empathy, and calls for reconciliation. Soldiers from both sides worked together to provide relief. But basic rifts re-

emerged before long. Government officials and rebels competed for aid distribution and repair work.

Hoping to reinvigorate the deadlocked peace process, international donors urged that a "joint mechanism" be established for the equitable distribution of relief and reconstruction aid. After drawn-out negotiations, the government and LTTE finally signed an agreement in June 2005, but the governing coalition broke apart over the deal. Presidential elections in November 2005 brought to power Mahinda Rajapakse, who vowed to scrap the aid-sharing deal.

Tensions between the government and the LTTE rose sharply. A shadow war in the eastern part of the country gathered momentum, with political killings on the rise. Though the situation was temporarily calmed, April and May saw an upward spiral in violence that triggered widespread fears of a return to full-scale conflict. Far from helping to overcome conflict, the response to the tsunami in Sri Lanka, which originally recognized the opportunity to strengthen relations, raised the stakes and sharpened the divides in a precarious conflict.

Lessons Learned

Goodwill and confidence-building in the aftermath of disasters can be a powerful catalyst for transforming conflict dynamics, but these sentiments do not automatically lead to peace. Humanitarianism needs to be translated into tangible political change. That means:

- Addressing grievances and root causes of conflict,
- Giving a strong voice to civil society, and
- Pressing forward with demilitarization.

The international aid and development communities must confront the vested interests of those who benefit from a continuation of conflict and thus might derail a peace process. Many militaries, for instance, fear that conflict resolution may lead to budget cuts and diminish their influence over society. Rebels and militant groups hold less sway in peacetime, while arms industries and dealers experience slower sales. These perspectives must be addressed as civil society, governments, and peace negotiators work toward positive outcomes in postdisaster conflict situations.

Michael Renner (*mrenner@worldwatch.org*)
Zoë Chafe (*zchafe@worldwatch.org*)
Worldwatch Institute

Worldwatch Institute is an interdisciplinary research organization based in Washington, DC. For more information about Worldwatch's research on natural disasters and peacemaking, see *www.worldwatch.org/features/disasters/*.

New Biography Chronicles Life of Gilbert F. White

To many in the hazards and disasters community, a biography of the eminent, public-minded geographer Gilbert F. White was a long time in coming. But, from one accomplishment to the next, White never seemed to slow, adding story after story to a life chock-full of memorable achievements. In ***Living with Nature's Extremes: The Life of Gilbert Fowler White*** (2006. 336 pp. $26.50), author Robert E. Hinshaw tracks White's fascinating life and his legacy to both science and humanity.

Known as the "father of floodplain management" and the founder of the Natural Hazards Center, White spent his career studying nature's extremes: the hazards they posed for humanity and the political, scientific, and philosophical issues surrounding their mitigation and effective societal response. White proposed that man work with nature, not against it, championing sound, comprehensive management of floodplains. He advocated adaptation to or accommodation of flood hazards, where feasible, rather than the structural solutions that dominated policy in the early twentieth century. He also made major contributions to the study of water systems in developing countries, the management and preservation of arid lands, global environmental change, international cooperation over water resources, and mitigation of a number of natural hazards.

Initially, White was not eager to see his life in print, but ultimately he recognized that through his experience, knowledge, and insight, current and future generations could continue to learn from his example and carry on his work. Thus, this book is recommended to anyone who shares his interests, his concerns, and his passions.

Published by Johnson Books, White's biography can be purchased from local and online booksellers or *Big Earth Publishing, 3005 Center Green Drive, Suite 220, Boulder, CO 80301; (303) 443-9766, (800) 258-5830; e-mail: books@bigearthpublishing.com; www.bigearthpublishing.com/*. A limited number of copies are available for a discount ($20.00 plus $5.00 for shipping and handling) from the Natural Hazards Center. To order from the Center, visit *http://ibs.colorado.edu/hazards/catalog/gfw/index.php* or contact *Diane Smith* at *(303) 492-6818* or *diane.smith@colorado.edu*.

Congratulations to 2006's Mary Fran Myers Scholarship Winners

The Natural Hazards Center is pleased to announce the 2006 winners of the Mary Fran Myers Scholarship: Aurélie Brunie, Elenka Jarolimek, and Alessandra Jerolleman. The scholarship recognizes outstanding individuals who are committed to disaster research and practice and have the potential to make a lasting contribution to reducing disaster vulnerability. It was established to ensure that all sectors of the hazards community are represented at the Center's annual workshop. Due to an increase in applicants and the excellent quality of applications this year, the Center has awarded three scholarships for 2006.

Aurélie Brunie is a PhD candidate in city and regional planning at the University of North Carolina at Chapel Hill. Originally from France, she has an engineering degree from the Ecole Centrale de Lyon and a master of science in environmental pollution control from Pennsylvania State University. Brunie specializes in social capital, collective action, empowerment, and disasters, focusing on how assistance programs can take advantage of existing structures to achieve more equitable and sustainable outcomes.

Elenka Jarolimek is the emergency management specialist at the University of Washington in Seattle. She comanaged the university's "Report on Emergency Preparedness for Special Needs Populations" and is now working on designing a model mitigation program to help departments and college units address seismic and storm-related risks and developing preparedness training programs for students, staff, and faculty. Jarolimek has a bachelor's degree in political science from Metropolitan State College of Denver and a master's in urban planning from the University of Washington.

Alessandra Jerolleman works on mitigation, community outreach, and disaster planning at the Center for Hazards Assessment, Response, and Technology at the University of New Orleans (UNO). She has worked on projects benefiting the New Orleans area, including benefit-cost analyses for retrofitting university buildings, flood mitigation planning for suburban neighborhoods, and identifying and implementing outreach projects for the Disaster Resistant University project. Jerolleman is completing a master's in public administration at UNO and will begin work on a PhD in urban studies in the fall.

Congratulations to all and many thanks to Mary Fran Myers, a former codirector of the Natural Hazards Center and a major guiding force for the Center as well as the broader hazards community. Based on her request, scholarship funds are used to bring individuals to the workshop who otherwise might not be able to attend. A gift account has been established with the University of Colorado Foundation. Contributions can be sent to *Mary Fran Myers Scholarship, Natural Hazards Center, University of Colorado, 482 UCB, Boulder, CO 80309-0482*. Make checks payable to the "University of Colorado Foundation." Visit *www.colorado.edu/hazards/scholarship/* for more information.

2006 Student Paper Competition Winners

The Natural Hazards Center is pleased to announce the winners of this year's Hazards and Disasters Paper Competition for Undergraduate and Graduate Students. This year's submissions reflect the truly interdisciplinary nature of this competition. Papers were received from students studying city and regional planning and policy; disaster and emergency management; engineering science in crisis, risk, and emergency management; environmental studies; geography; history and philosophy of science; mass communication; public affairs; and structural engineering. Topics included Hurricane Katrina, drought, preparedness, flooding, interorganizational processes, earthquakes, and looting.

Papers were judged primarily on originality and content. The winning papers presented a well-organized and logical argument that was engaging and demonstrated the authors' knowledge and ability to integrate a broad scope of resources and references on a topic. Lindsey Barnes from the University of Colorado at Colorado Springs took home the undergraduate award for "Public Perceptions of Flash Flood False Alarms: A Denver, Colorado Case Study," which looked at perceptions among Denver floodplain residents and identified how gender and age affects their perceptions of false alarms. Brooke Fisher Liu from the University of North Carolina at Chapel Hill took home the graduate award for "Preparing the People," a content analysis of the 50 state emergency management Web sites that identified markers of effective electronic government. Read the winning papers at *www.colorado.edu/hazards/SPC/*. The 2007 call for papers will be announced in January.

Calling All Students: Get Online with Disaster Grads!

If you are a student studying hazards and disasters, you should be on Disaster Grads, where you can stay up to date with regular postings of calls for papers, announcements about assistantships and fellowships, news about programs, conferences and workshops, and information inquiries. Disaster Grads is an e-mail listserv for informal discussion and information sharing among undergraduate and graduate students who do research in the area of hazards and disasters. The list is a great way to exchange information with other students with similar interests and to ask for and share support and resources. Disaster Grads currently has more than 470 subscribers representing 24 countries, numerous academic institutions, and a variety of departments and programs, such as geography, engineering, public health, sociology, and economics.

To subscribe, send an e-mail to *listproc@lists.colorado.edu* with the message "subscribe disaster_grads [first name] [last name]" (Example: subscribe disaster_grads John Doe) and read the guidelines and rules of conduct, which are available at *www.colorado.edu/hazards/special_projects/disastergrads.htm*. To offer feedback, ask questions, and/or express concerns, contact the list moderator, *Christine Bevc*, at *(303) 492-0428* or *christine.bevc@colorado.edu*.

Beyond Flood Control: Building a More Resilient New Orleans

On April 14, 1912, the SS *Titanic*, declared unsinkable by its builders, hit an iceberg and sank—1,522 lives were lost. The resulting investigations addressed not only how to build even stronger ships, but also how to protect lives in the event of a shipwreck. Recommendations included providing a sufficient number of lifeboats, conducting drills, improving communications, and instituting safer navigation rules. Since the *Titanic*, no vessel has been deemed "unsinkable," just as no airplane is "uncrashable."

Similarly, New Orleans will never be "unfloodable." Certainly, its levees and floodwalls need to be repaired and, if possible, strengthened to a 100-year level of protection. But no flood control system is foolproof. Consider how John Barry describes the Mississippi River in his 1997 book ***Rising Tide*: *The Great Mississippi Flood of 1927 and How it Changed America***: "Unlike a human enemy, the river has no weakness, makes no mistakes, is perfect; . . . it will find and exploit any weakness. To repel it requires an intense, nearly perfect, and sustained effort."

The epic 1927 Lower Mississippi River flood extended from Cairo, Illinois, to the Gulf of Mexico, displacing nearly one million people and creating a temporary lake over 100 miles across at many points. Mainline levees bordering both sides of the river failed *despite assurances by the Mississippi River Commission that they were designed to be impregnable* (and frantic efforts to shore them up with sandbags).

Like the 1927 flood, Hurricane Katrina's storm surge exploited weaknesses in New Orleans' aging and subsiding flood protection system. The jubilation that it did not overtop the Mississippi River levees quickly gave way to the horror that resulted from the "backdoor" flooding from Lake Pontchartrain and the breaching of the flood walls that lined canals inside the city. Predictably, there now are calls for an even more massive flood protection system.

Whatever level of protection New Orleans and Louisiana are able to wrest from the federal government, it would be foolish to put all the city's eggs in the flood control basket. It is fiendishly difficult to design a cost-effective project to protect against a 100-year flood, a category 5 hurricane, or any other abstract standard. Predicting the height of a hurricane storm surge is fraught with uncertainties. Besides the intensity of the storm, impacts on the ground depend greatly on where the storm hits land, the stage of tide at that time, the presence of wetlands to buffer storm waves, and the effects of flood control structures and other obstacles that the storm may encounter.

Assuming a flood control design standard is agreed upon, other barriers to successful implementation may still exist. Land use issues may arise: higher and wider levees would require that additional land be removed from urban use. A project may never be fully funded, it may never be completed because of technical or environmental reasons (e.g., the Auburn Dam in California, which was abandoned due to earthquake risk), or it may simply not work as planned, like the Davis Pond wetland restoration diversion project near New Orleans. Another important consideration is that flood barriers built on subsiding land, as in New Orleans, will gradually sink in relation to sea level, thus reducing their effective level of protection.

Whatever is done about enhancing flood protection, New Orleans also needs to strengthen its flood resilience through practical backup measures, the equivalent to providing a sufficient number of lifeboats on a ship. Many lessons from Katrina must be learned and applied to the improvement of evacuation plans, sheltering, communications, and providing food, water, and medical care. Critical facilities like hospitals, police and fire stations, and command posts must be designed to withstand flooding. Issues like jurisdiction over the U.S. National Guard need to be settled in advance to avoid repeating the spectacle of a president and a governor disagreeing in the middle of a crisis.

A very troubling issue now facing New Orleans is the question of how high buildings should be elevated in areas flooded by Katrina. In April, the Federal Emergency Management Agency (FEMA) recommended that substantially damaged homes and businesses protected by levees elevate three feet, or follow what is shown on the current effective flood insurance rate map, whichever is higher, even if Katrina's flood levels far exceeded these heights.

This policy move should help relieve the paralysis of the rebuilding process that had been awaiting FEMA's elevation decision, and it acknowledges that the city faces a residual flood threat no matter what is done to strengthen levees and flood walls—which may not be completed for years, if ever. However, three feet of elevation is a cop-out for areas that experienced much higher flood levels. The danger is that inadequate elevation standards will create a false sense of security for unwary builders, investors, insurers, and residents—setting the stage for the next Katrina.

New Orleans cannot base its future entirely upon the vagaries of the political process and high-cost flood control projects. Rather than awaiting the illusory goal of "total protection," the city's residents, tax base, and lifelines can be protected through realistic rebuilding practices and improved evacuation and sheltering plans guided by a proper respect for nature, which, to reiterate, "has no weakness, makes no mistakes."

Rutherford H. Platt (*platt@geo.umass.edu*)
Department of Geosciences (Geography)
University of Massachusetts Amherst

Washington Update

DHS and FEMA Gear Up for Storm Season

Hurricane season 2006 is here and the U.S. Department of Homeland Security (DHS) and its Federal Emergency Management Agency (FEMA) have taken strides to increase the nation's preparedness for catastrophic events and smaller-scale disasters. While emphasizing that states and localities have the lead in emergency response, DHS and FEMA insist they are better prepared to coordinate the federal government's supporting role if the need arises.

Among the new measures designed to strengthen FEMA's essential functions for more effective overall response are:

- Placement of a U.S. Department of Defense coordinating officer in each of FEMA's 10 regional offices for ongoing preparedness and response coordination;
- Deployment of FEMA liaisons to local, as well as state, emergency operations centers;
- Introduction of situational awareness teams;
- Augmentation of survivable and interoperable communications capabilities;
- Implementation of new systems to procure, track, deliver, and manage commodities;

- Expansion of sheltering, registration, home inspection, and temporary housing capabilities; and
- Strengthening and increasing of the size of the disaster workforce.

To find out more about these measures and others, visit these FEMA and DHS links: *www.fema.gov/news/newsrelease.fema?id=25061*, *www.dhs.gov/dhspublic/interapp/press_release/press_release_0910.xml*, and *www.dhs.gov/dhspublic/interapp/editorial/editorial_0846.xml*.

DHS Updates National Response Plan

The U.S. Department of Homeland Security (DHS) has updated the National Response Plan (NRP) to incorporate modifications based on organizational changes within DHS as well as the experiences of responding to Hurricanes Katrina, Wilma, and Rita in 2005. The ***Notice of Change to the National Response Plan*** (51 pp.) and a new ***Quick Reference Guide to the National Response Plan*** (27 pp.) are available at *www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml*. Designed to incorporate critical changes in advance of the 2006 hurricane season, the notice precedes the first official interagency review of the NRP and is limited in scope. DHS intends to initiate a comprehensive stakeholder review of the plan in fall 2006, following which, the NRP will be reissued.

Also available on this Web page are the new ***Interagency Integrated Standard Operating Procedure: Joint Field Office (JFO) Activation and Operations*** (72 pp.), ***Interagency Integrated SOP Appendixes and Annexes: Joint Field Office (JFO) Activation and Operations*** (232 pp.), and ***Joint Field Office (JFO) Field Operations Guide (FOG)*** (157 pp.).

Lead Federal Officials Named for 2006 Hurricane Season

The U.S. Department of Homeland Security (DHS) has predesignated five teams of individuals from the Federal Emergency Management Agency and the U.S. Coast Guard to coordinate the federal government's role in support of state and local governments in preparing for and responding to major natural disasters for the 2006 storm season. Teams have been designated for the Gulf Coast, the Northeast and Mid-Atlantic regions, and the states of Florida and Texas. Each team has a principal federal of-

ficial (PFO), a deputy principal official (DPFO), and a federal coordinating officer (FCO). To find out who comprises these teams, read the press release at *www.dhs.gov/dhspublic/display?content=5552*. To find out more about the role of PFOs and FCOs, see the National Response Plan at *www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml*.

NOAA: Another Stormy Summer Looms

National Oceanic and Atmospheric Administration (NOAA) hurricane forecasters have predicted another above-normal hurricane season for the Atlantic in 2006. The prediction is for 13 to 16 tropical storms, including 8 to 10 hurricanes, 4 to 6 of which may become major hurricanes (category 3 or higher). On average, the Atlantic hurricane season produces 11 named storms, including 6 hurricanes (2 major). In 2005, the season featured a record 28 storms, 15 of which were hurricanes (7 major). Although NOAA is not forecasting a repeat of last year, the agency warns that the potential for hurricanes striking the United States is high. In late May, the U.S. Senate Commerce Committee's Subcommittee on Disaster Prevention and Prediction held a hearing titled "2006 Hurricane Forecast and At-Risk Cities." An archived webcast and testimony from Max Mayfield, director of the National Hurricane Center, are available at *http://commerce.senate.gov/*.

In contrast to the Atlantic, NOAA's outlooks for the East and Central Pacific predict below-normal hurricane seasons. The East Pacific can expect 12 to 16 tropical storms, including 6 to 8 hurricanes (2 to 4 major). An average East Pacific hurricane season features 15 to 16 tropical storms, including 9 hurricanes (4 or 5 major). Two or three tropical cyclones are projected for the Central Pacific, where in a typical year four to five tropical cyclones can be expected to form or cross into the area.

For more information, visit the Climate Prediction Center at *www.cpc.ncep.noaa.gov/*, NOAA's Hurricane Research Division at *www.aoml.noaa.gov/hrd/*, the National Hurricane Center at *www.nhc.noaa.gov/* (check out the tropical cyclone advisory mailing lists), and the Central Pacific Hurricane Center at *www.prh.noaa.gov/cphc/*.

Senate Report on Katrina Blames Officials and Systems, Calls for New Agency

Following reports from the White House and the U.S. House of Representatives, the U.S. Senate's Committee on Homeland Security and Government Affairs released ***Hurricane Katrina: A Nation Still Unprepared*** (749 pp.) based on its investigation into the disaster. The purpose of the investigation was to better understand how and why failures occurred and to make recommendations to strengthen U.S. emergency preparedness and response efforts.

According to the committee, four overarching factors contributed to the response failures: long-term warnings went unheeded and government officials neglected their duties to prepare for a forewarned catastrophe; government officials took insufficient actions or made poor decisions in the days immediately before and after landfall; systems on which officials relied on to support their response efforts failed; and government officials at all levels failed to provide effective leadership. The committee also noted a failure, over time, to develop the capacity for a coordinated national response to a catastrophic event.

In light of this persistent failure, the committee offered seven foundational recommendations together with a series of supporting tactical recommendations. First and foremost is the recommendation that the Federal Emergency Management Agency be replaced by a National Preparedness and Response Authority (NPRA) in the U.S. Department of Homeland Security, which would be headed up by a deputy secretary with a direct line to the president during a catastrophe: an individual with experience in crisis management and substantial management and leadership experience.

The remaining recommendations focus on reuniting the four phases of emergency management (mitigation, preparedness, response, and recovery), enhancing regional operations, building a government-wide operations center, renewing and sustaining commitments at all levels of government to the nation's emergency management system, strengthening the underpinning of the nation's response to disasters and catastrophes, and improving the nation's capacity to respond to catastrophic events.

Download a copy of the report from *http://hsgac.senate.gov/_files/Katrina/FullReport.pdf*. Individual sections, along with related files and links, are available at *http://hsgac.senate.gov/index.cfm?Fuseaction=Links.Katrina*.

DHS Releases Performance Review of FEMA's Response to Katrina

The U.S. Department of Homeland Security (DHS) Office of Inspector General has released the report ***A Performance Review of FEMA's Disaster Management Activities in Response to Hurricane Katrina*** (218 pp.). In addition to assessing the Federal Emergency Management Agency's (FEMA) response to Katrina, the report examines whether laws, regulations, policies, procedures, plans, guidelines, and resources were adequate and operational and whether FEMA's organizational structure enhanced or hindered its emergency management capabilities.

The report finds that changes are needed to implement the National Incident Management System and the National Response Plan, including adjustments to the use of incident designations, the role of the principal federal official, and the responsibilities of emergency support function coordinators. Improvements in grant programs, staffing, training, and catastrophic planning are called for to better support state emergency management and federal response and recovery. Thirty-eight recommendations are made in the report, including that measurable expectations be established for FEMA and that financial, technical, and staff support be provided to meet them.

The report is available online at *www.dhs.gov/interweb/assetlibrary/OIG_06-32_Mar06.pdf*.

New DVD Teaches Family Preparedness

Getting Ready for Disaster—One Family's Experience, a citizen preparedness DVD from the Federal Emergency Management Agency (FEMA), has been released to help people prepare for disasters. The DVD guides viewers

through important steps of disaster preparedness and addresses critical issues in seven segments: Getting Informed, Making a Plan, Assembling a Disaster Supplies Kit, Food and Water in an Emergency, Helping Children Cope with Disaster, Disability and Special Needs Populations, and Getting Involved—Citizen Corps. The DVD was designed to be used with ***Are You Ready? An In-depth Guide to Citizen Preparedness*** and the accompanying facilitator manual for teaching preparedness principles.

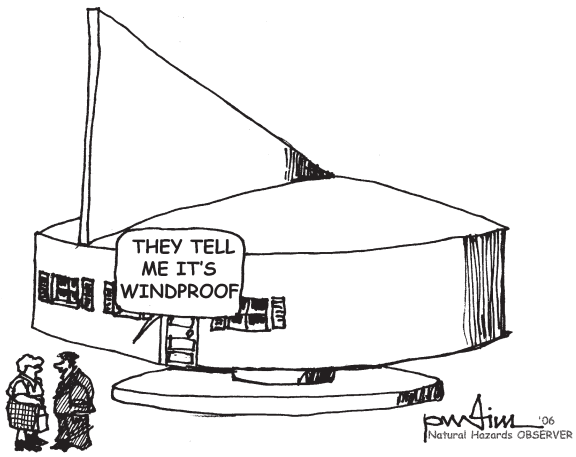
Free copies of the DVD (FEMA 500) and the ***Are You Ready*** guides (IS-22 and IS-22FG) are available through the FEMA Distribution Center at *(800) 480-2520*. Requests are currently limited to one DVD per caller. In the coming months, the DVD will be translated into Spanish and will be available in both languages on a single DVD. Video files, a transcript, and the guide can also be downloaded from *www.fema.gov/areyouready/*.

Windstorm Impact Reduction Implementation Plan

In April, the president's Office of Science and Technology Policy National Science and Technology Council (NSTC) released ***Windstorm Impact Reduction Implementation Plan*** (32 pp.). Mandated by the National Windstorm Impact Reduction Act of 2004, the plan was authored by the interagency working group established to achieve the objectives of the law: namely to reduce the risk wind hazards pose to life and property.

The plan examines current activities and capabilities; identifies gaps in knowledge, implementation, and coordination; and makes recommendations. It calls for improved cooperation and coordination between federal agencies, improved coordination with states and local governments, and increased, focused federal investment in wind hazard reduction efforts. Specifically, it recommends that a coordinated, comprehensive, multiagency, and multidisciplinary group be established as a working group of the NSTC's Committee on Environment and Natural Resources Subcommittee on Disaster Reduction to facilitate communication among agencies, effectively allocate collective resources, and establish and operate within a common framework.

Download a copy of the plan at *http://sdr.gov/Windstorm%20Impact%20Reduction%20Implementation%20Plan%20FINAL.pdf*.



DHS Joins with Animal Groups to Encourage Preparedness for Pets

The U.S. Department of Homeland Security has joined with the American Kennel Club, the American Society for the Prevention of Cruelty to Animals, the American Veterinary Medical Association, and the Humane Society of the United States to encourage pet owners to prepare for emergencies. In conjunction with DHS' Ready campaign, the partners developed a new brochure that highlights the key steps pet owners should take to prepare themselves and their animals. The brochure suggests making a pet emergency supply kit including food, water, medicines and medical records, collar with ID tag, a leash or harness, and a picture of the pet with its owner. It also recommends having an emergency plan and learning which shelters will allow pets in the event of an emergency. For a copy of the emergency preparedness for pet owners' brochure, visit *www.ready.gov/america/pets.html* or call *(800) 237-3239*.

DOT Releases Evaluation of Gulf Coast States' Evacuation Plans

At the request of Congress, the U.S. Department of Transportation (DOT), in cooperation with the U.S. Department of Homeland Security, reviewed and assessed federal and state evacuation plans for catastrophic hurricanes and other catastrophic events that may affect the Gulf Coast region. The findings and recommendations were reported to Congress and are documented in ***Report to Congress on Catastrophic Hurricane Evacuation Plan Evaluation*** (189 pp.). The assessment looked at plans for moving people away from areas threatened by catastrophic events; providing critical food, water, and supplies for evacuees en route; as well as plans for providing shelter to evacuees from other areas. In addition to assessing plans, the report examines federal, state, local, and transportation roles in evacuations and summarizes lessons learned from and best practices in planning and conducting mass evacuations. Read the report online or download a copy at *www.fhwa.dot.gov/reports/hurricanevacuation/*.

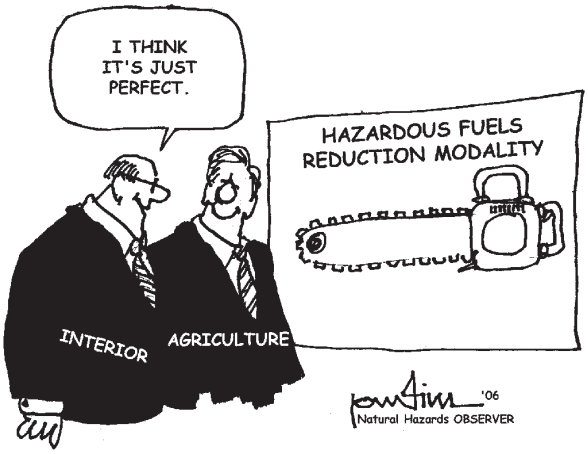
Tsunami Monitoring Now on All U.S. Coasts

In April, the National Oceanic and Atmospheric Administration (NOAA) announced that five of seven planned Deep-Ocean Assessment and Reporting of Tsunami (DART) buoy stations had been installed in the Atlantic and the Caribbean as part of the expansion of the U.S. tsunami warning system. The newly installed stations are a more robust DART II that are equipped with advanced two-way satellite communication. NOAA expects the network to total 39 DART II stations by the end of March 2008 (32 in the Pacific and 7 in the Atlantic). With the addition of the new stations off New Orleans, Louisiana; Charleston, South Carolina; Miami, Florida; and San Juan, Puerto Rico (two), NOAA's tsunami warning centers can now provide tsunami watches and warnings to the entire U.S. Atlantic Coast, Gulf of Mexico, Puerto Rico, the U.S. Virgin Islands, and eastern Canada. Visit the DART Web site for

background, technical information, and real-time data at *http://nctr.pmel.noaa.gov/Dart/*.

Agencies Release Fuels Reduction Strategy

The U.S. Department of the Interior and the U.S. Department of Agriculture (USDA) have released a new joint strategy for addressing hazardous fuels to reduce the risk of catastrophic wildfires on more than 180 million acres of public forests, woodlands, and rangelands.



The report, ***Protecting People and Natural Resources: A Cohesive Fuels Treatment Strategy*** (60 pp.), outlines a coordinated approach to fuels treatment adopted by the five major federal land management agencies: Bureau of Indian Affairs, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, and USDA Forest Service. It describes practices that have worked since the agencies began collaborating on the strategy and establishes a framework for future priority-setting, accountability, and partnership to reduce the fuel buildup that leads to fires.

The strategy calls for first priority to be given to the wildland-urban interface areas where there is the greatest threat to human life and property. Outside these areas, priority will be given to reducing fuels where dense, overgrown vegetation is most likely to support catastrophic fires, especially where important watersheds or wildlife habitat is at risk. The strategy also provides details on the areas at risk, local priority setting, fire regimes and classes, and how federal and local agencies can integrate their fuels plans in the wildland-urban interface.

For more information, read the strategy at *www.fireplan.gov/documents/cohesive_fuels_strategy03-03-06.pdf*.

National Earthquake Prediction Evaluation Council Reborn

The U.S. Geological Survey (USGS) has reestablished the National Earthquake Prediction Evaluation Council (NEPEC) and appointed 12 scientists to the panel. The council was rechartered based on advice from the congressionally authorized Scientific Earthquake Studies Advisory Committee, which provides oversight and guidance to the USGS Earthquake Hazards Program. First established in 1976, the NEPEC was formally authorized by Congress in the 1980 reauthorization of the National Earthquake Hazards Reduction Program and remained active through the early 1990s. Made up of scientists from the USGS and a number of academic institutions, the council will advise the director of the USGS on earthquake prediction, forecasting, and hazard assessment.

USDA Forest Service Seeks Information on Homeowner Risk Reduction Behaviors

The U.S. Department of Agriculture (USDA) Forest Service has issued a request for comments regarding an information collection on "Homeowner Risk Reduction Behaviors Concerning Wildfire Risks." The Forest Service intends to conduct surveys of homeowners located in the wildland-urban interface that were affected by wildfires to collect information about risk perceptions regarding wildfire, risk reduction behaviors associated with wildfire, sources of information regarding wildfires and wildfire risk reduction, and socioeconomic information.

For more information and to find out how to submit comments (due August 4, 2006), read the notice in the June 5, 2006, issue of the ***Federal Register***, Vol. 71, No. 107, p. 32302, which can be found in any federal depository library or online at *www.gpoaccess.gov/fr/*. Address questions to *Brian Kent, Rocky Mountain Research Station; (970) 295-5955, (800) 877-8339 (TDD)*.

HUD Gives Break to Disaster Victims

In an effort to help families displaced by the Gulf Coast hurricanes attain homeownership, the U.S. Department of Housing and Urban Development (HUD) is giving evacuees the opportunity to buy HUD-owned properties at a discount. Following the hurricanes, HUD provided interim rental housing to many families in the form of HUD-owned properties. These families now have the opportunity to purchase the homes they are occupying at a discount of 10 percent off the property's fair market value. In addition to making homeownership opportunities available to evacuees already occupying HUD-owned properties, the department is establishing a nationwide sales initiative providing discounts and preferences for Gulf area hurricane evacuees seeking housing anywhere in any of the 50 states. HUD expects that up to 20,000 properties could be made available to hurricane evacuees through this initiative. For more information, read the press release at *www.hud.gov/news/release.cfm?content=pr06-046.cfm*.

New NIMS Resource Management Course

The latest addition to the Federal Emergency Management Agency's (FEMA) arsenal of independent study National Incident Management System (NIMS) courses is NIMS Resource Management, IS-703. This interactive computer-based course provides the principles, tools, processes, and systems used in NIMS that incident managers need for effective resource management in times of disaster. Primary tasks addressed are establishing systems for describing, inventorying, requesting, and tracking resources; activating these systems; dispatching resources; and deactivating or recalling resources. Find out more, or take the class, at *http://training.fema.gov/emiweb/is/is703.asp*.

Interim Rule Adds Appeals Process to NFIP

The Federal Emergency Management Agency (FEMA) has issued an interim final rule to amend the National Flood Insurance Program (NFIP) to include an appeals process for NFIP policyholders as required by Congress in the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004. This process will enable a policyholder to formally appeal the decision of any insurance agent, adjuster, or company or any FEMA employee or contractor with respect to their standard flood insurance policy claim, proof of loss, and loss estimate.

This rule is effective June 26, 2006. For more information and to find out how to submit comments (due July 25, 2006), read the rule in the May 26, 2006, issue of the ***Federal Register***, Vol. 71, No. 102, pp. 30294-30298, which can be found in any federal depository library or online at *www.gpoaccess.gov/fr/*. Address questions to *James Shortley, FEMA, 500 C Street SW, Washington, DC 20472; (202) 646-3418; e-mail: James.Shortley@dhs.gov*.

New Ready Business Mentoring Initiative

Designed as a call-to-action for business leaders, the U.S. Department of Homeland Security (DHS) has launched a Ready Business Mentoring Initiative. The initiative includes the Ready Business mentoring guides (mentor and user versions), which are designed to teach business owners and managers about affordable ways to better protect their businesses. DHS collaborated with the Education Disaster Extension Network to create presentation materials to support the guides and help business and community leaders host and deliver business preparedness workshops and training sessions. Download the guides and the presentation materials at *www.ready.gov/business/mentor/*.

NOAA Releases Economic Statistics

The National Oceanic and Atmospheric Administration (NOAA) has released its 2006 edition of statistics on economic impacts of agency products and services. ***Economic Statistics for NOAA*** (35 pp.) provides a consistent set of economic statistics for NOAA management as well as national policy makers and the general public. The economic study draws linkages between various activities within NOAA and the greater national and world economies. It is structured around three areas: general economic and social impacts; contribution to U.S. income, employment, and output; and coastal ocean economics, population, employment, and benefits. Download a copy of the publication at *www.economics.noaa.gov/* or request a copy from NOAA Economics and Social Science at *(301) 713-3322 x182*.

CBRA Reauthorized through 2010

In May, the president signed the Coastal Barrier Resources Reauthorization Act of 2005 (Public Law 109-226). The intent of the original 1982 Coastal Barrier Resources Act (CBRA) was to slow development on coastal barriers to prevent and mitigate loss of life, wasteful federal expenditures, and damage to natural resources. It does so by denying access to federal programs that expend funds or provide financial assistance (including flood insurance) in support of development on undeveloped coastal barriers in the John H. Chafee Coastal Barrier Resources System. Renewal of the act provides for digital mapping of the system and authorizes appropriations through fiscal year 2010. Find the law in any federal depository library and on the Library of Congress Web site at *http://thomas.loc.gov/*.

Misc. Reports from DHS

The following reports are available for download from the U.S. Department of Homeland Security:

Review of DHS' Progress in Adopting and Enforcing Equipment Standards for First Responders. Office of Inspections and Special Reviews. 2006. 56 pp. *www.dhs.gov/interweb/assetlibrary/OIG_06-30_Mar06.pdf*.

State Interoperable Communications: DHS Funded Activities Fiscal Years 2003-2005. Office of Grants and Training. 2006. 132 pp. *www.ojp.usdoj.gov/odp/docs/State_Interoperable_Communications.pdf*.

Report of the Critical Infrastructure Task Force. Homeland Security Advisory Council. 2006. 57 pp. *www.dhs.gov/interweb/assetlibrary/HSAC_CITF_Report_v2.pdf*.

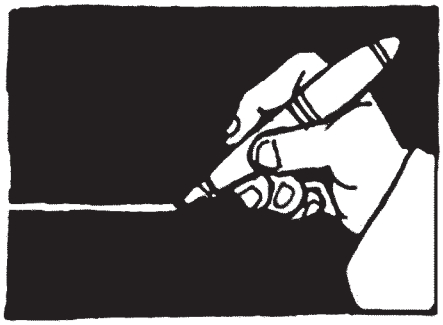
A Review of the Top Officials 3 Exercise. Office of Inspections and Special Reviews. 2005. 83 pp. *www.dhs.gov/interweb/assetlibrary/OIG_06-07_Nov05.pdf*.

Levee Reports Take Aim at Corps

Two new reports blame the U.S. Army Corps of Engineers, in part, for the flooding of New Orleans following Hurricane Katrina. ***Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System: Draft Final Report of the Interagency Performance Evaluation Task Force*** (6,000 pp.) from the Corps' Interagency Performance Evaluation Task Force (IPET) details the engineering and design flaws that they believe allowed the storm surge to overwhelm the city's levees and floodwalls.

Another report, funded by the National Science Foundation and the University of California, Berkeley, ***Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005*** (700+ pp.), concluded that the levees failed because of design and construction errors resulting from insufficient money and lack of appropriate oversight by federal, state, and local agencies, the Corps, in particular.

The reports, which are still both "draft finals," are available at *https://ipet.wes.army.mil/* and *www.ce.berkeley.edu/~new_orleans/*, respectively. An American Society of Civil Engineers External Review Panel is conducting a comprehensive review of the IPET report and expects to offer its technical comments in a formal report in July.



On the Line

IBHS Leads the Way to Safer Living

There is almost no place where a home is out of reach of a natural disaster risk. Wildfires, floods, hurricanes, tornadoes, earthquakes, hailstorms, blizzards. One or more of these natural disasters can occur virtually anywhere.

We all want to feel safe in our homes, but we know from sad experience that natural disasters can destroy homes by the tens of thousands. We also know from engineering studies conducted in the wake of recent natural disasters that houses can be made to better withstand most natural calamities, significantly reducing property damage and personal injuries.

Fortified . . . for safer living

The Institute for Business & Home Safety (IBHS) introduced the "Fortified . . . for safer living" program in late 2000. The program was initiated in Florida to demonstrate how houses could be built to withstand hurricane, wildfire, and flood damage without significantly increasing construction costs. Later, "Fortified" standards were developed to address other disaster risks around the country. This was done by looking at historical data from the National Oceanic and Atmospheric Administration and other organizations that track disasters and by working with an advisory committee of academics, insurance industry experts, and others.

A house that achieves the IBHS Fortified designation raises a home's overall level of disaster resistance and offers increased peace of mind for the homeowner. There are now about 2,500 Fortified houses completed, under construction, or planned in 10 states. Florida, Texas, and South Carolina have entire Fortified . . . for safer living neighborhoods. Other states with Fortified houses, either built or in the pipeline, include Alabama, Illinois, Louisiana, Missouri, New Jersey, North Carolina, and Wisconsin.

Because natural disaster risks exist nearly everywhere, the Fortified program has been designed to be applied anywhere. Program criteria can be tailored to cover the perils peculiar to a specific location. A Fortified house built in the far north-central part of the nation, for instance, would include features that protect against severe winter weather. Those features would not be required in a Fortified house built along the Gulf Coast.

Fortified criteria also can be applied to any form of construction, so it does not matter if a builder uses wood frame construction or newer methods, like insulating concrete forms (ICF) or structural insulated panels (SIPs). Even modular homes, built in sections in a factory and shipped to a building site, can qualify for the Fortified designation. The style or beauty of a home is not compromised, because the strength comes from tying the roof, walls, and foundation together better, building a strong roof, and preserving the building envelope by using higher design pressure- or impact-resistant windows and doors or other methods of protecting the openings from wind-borne debris.

Modern Requirements and Materials for Modern Needs

The Fortified requirements are referred to as "code plus" because they exceed building codes, the minimum acceptable standards for construction. Furthermore, many states do not have a uniform standard, and some communities use older, sometimes outdated codes. Fortified houses are built in ways that go beyond these minimums, which means greater structural strength than most conventionally built houses. One requirement applies regardless of location: a house must be able to withstand a minimum of 130 miles per hour peak gust winds.

The many natural disasters that have hit the United States in recent years are making builders and home buyers more conscious of the advantages of using construction materials and techniques to build stronger structures. Shortages of skilled tradesmen are also prompting a move to the use of newer construction systems, such as ICF and SIPs, because they are relatively easy to install, strong, and more energy efficient, according to Chuck Vance, IBHS Fortified program manager.

"For years we were talking about frame construction. Today we are seeing a large influx of systems, whether out of wood, concrete, steel, or a combination, that are tested and making inroads," Vance said.

Energy efficiency is also becoming a concern, as home heating and cooling bills climb. Builders who use the newest construction systems to reduce energy costs, such as ICF and SIPs, are finding that for little added cost, they often can achieve the Fortified designation by including items such as pressure- or impact-resistant windows and doors and better roofing materials.

Fortified in Practice

One of the newest houses to be built to Fortified standards was completed in late April in Paterson, New Jersey. The strength of the house comes from features including:

- Hurricane straps that provide extra-strong connections between the roof and walls;
- Pressure- or impact-resistant windows and doors that resist powerful winds, withstand higher wind and water pressures, and, when impact-rated, prevent breakage if they are struck by flying debris;
- Insulated concrete form walls and floors and structural insulated wall and roof panels that make a home more energy efficient and more rigid in construction; and
- Hail- and wind-resistant roofing materials.

"When you think about disasters, New Jersey isn't top-of-mind," said Vance. "But there is risk in every part of the country, and here the greatest concerns are high wind and severe winter weather. Fortified criteria build in protection and offer homeowners peace of mind."

The Paterson house was built as part of BASF's Better Home, Better Planet Initiative. BASF made sure the house was highly energy efficient, environmentally friendly, healthy for occupants, and affordable. BASF calls it a Near Zero Energy Home because it uses ICF, SIPs, solar energy, metal roofing materials, high-efficiency window glass, and other features that cut energy costs by about 80 percent.

"By using these high-performance building systems, we're not only getting a very strong house, but also a super energy efficient house," said Jack Armstrong, who spearheaded construction for BASF. "It's really worthwhile to go all the way [to achieve the Fortified designation] to reap all these other benefits."

Unlike New Jersey, the hurricane risk in South Carolina is well known. Less well known is the area's earthquake risk. The Charleston area was hit by a temblor in the 1800s, so the Siena Park at Grande Dunes development being built has features to withstand hurricanes and earthquakes, said Berkley White, vice president of Classic Home Building & Design.

"We've been doing ICF construction for about five years," White said. "It seemed a natural fit with what we were doing, to piggyback on the Fortified program. We were practically building to Fortified standards anyway. With the ICF construction, we use a poured-in-place monolithic slab with rebar integrated into the wall system. That creates a strong footing to wall connection. We simply had to use different straps for the connections of the roof to the walls. We also had to use different garage doors with stronger struts. But that's about it. We were already using impact-resistant glass. Our houses have resistance to natural disasters, are quiet, and meet or exceed standards for Energy Star."

Another important feature of the Fortified designation is its affordability. This is exemplified by Habitat for Humanity homes in three states that have been built to the Fortified . . . for safer living standards. IBHS member companies Nationwide Insurance, Travelers of Florida, and American Family Insurance have helped to sponsor the construction of these important projects.

Owners of Fortified houses also usually enjoy lower utility bills and, in some cases, can be eligible for discounted insurance premiums. South Carolina Farm Bureau Mutual Insurance Company, American National Property and Casualty Company, AAA Chicago Motor Club, and Travelers of Florida have announced discounts for qualifying policyholders in certain states whose homes are built to the Fortified standards.

Since the Fortified . . . for safer living program debuted in Florida, builders and home buyers from New Jersey to Texas and from Louisiana to Wisconsin have embraced it. Continued expansion of the Fortified program is expected as word of the peace of mind and other benefits it brings continues to spread.

Harvey Ryland
Institute for Business & Home Safety

The Institute for Business & Home Safety is a national nonprofit initiative of the insurance industry to reduce the social and economic effects of natural disasters and other property losses by conducting research and advocating improved construction, maintenance, and preparation practices. Learn more about the Fortified . . . for safer living program and IBHS at *www.ibhs.org/*.

ASFPM: Setting the Bar for Excellence in Floodplain Management

While the National Flood Insurance Program (NFIP) is recognized as the baseline for floodplain management, it does not comprise all aspects of floodplain management. Wise floodplain development exceeds minimum approaches. Thus, floodplain managers should have a working knowledge of the broad array of topics, terms, concepts, policies, and programs that work together to reduce flood losses.

In support of promoting the professionalism of floodplain management and higher management standards, the Association of State Floodplain Managers (ASFPM) developed a comprehensive Body of Knowledge that goes beyond the NFIP and helps redefine the profession of floodplain management. Rooted in the NFIP, the new Body of Knowledge is based on a solid understanding of the physical and biological processes operating on floodplains and watersheds; a history of human interaction with floodplains and drainage basins; risk analysis; and land use and technical tools that can guide sustainable development in floodplains and watersheds.

For over 30 years, the ASFPM has supported floodplain management professionals by helping them mitigate the losses, costs, and human suffering caused by flooding and promoting the wise use of natural and beneficial functions of floodplains. In 1999, the ASFPM established the Certified Floodplain Manager Program, a national certification program for floodplain managers. The program recognizes the importance of continuing education and professional development that enhance the knowledge and performance of floodplain managers from all sectors.

In an effort to further expand the knowledge base, the ASFPM is promoting a wide range of courses available through their Web site at *www.floods.org/* and supporting university curriculum and certificate programs. Specifically, the association recently partnered with the Federal Emergency Management Agency's Higher Education Project to develop a graduate-level course on floodplain management, which is available for free download at *http://training.fema.gov/emiweb/edu/fm.asp*.

Review the Body of Knowledge at *www.floods.org/pdf/asfpm_body_of_knowledge_013106.pdf*. Comments, suggestions, or learning opportunities that advance this ongoing project are welcome and should be sent to *Bob Freitag, Institute for Hazards Mitigation Planning and Research, University of Washington; e-mail: bfreitag@u.washington.edu*. To learn more about opportunities in floodplain management, visit *www.floods.org/Conferences,%20Calendar/calendar.asp*.

Initiative Promotes Hurricane Survival

Launched in May, the 2006 National Hurricane Survival Initiative is a partnership of the National Hurricane Center, the Salvation Army, the National Emergency Management Association, and others that aims to build hurricane knowledge through an informative Web site, radio and television public service announcements, and two 30-minute television special broadcasts ("Hurricane 2006!" and "National Hurricane Survival Test"), which will air on network affiliate and cable stations in 16 states.

In conjunction with the launch, the initiative announced the findings of a new regional survey that reveals that a dangerously high percentage of residents in hurricane vulnerable states still are not prepared, do not take the threat of hurricanes seriously, and have big gaps in what they know about hurricanes. Of those surveyed:

- 56 percent do not feel vulnerable to a hurricane or related tornado or flooding,
- 60 percent have no family disaster plan,
- 68 percent have no hurricane survival kit,
- 83 percent have taken no steps to make their homes stronger, and
- 13 percent said they might not or would not evacuate even if ordered to leave.

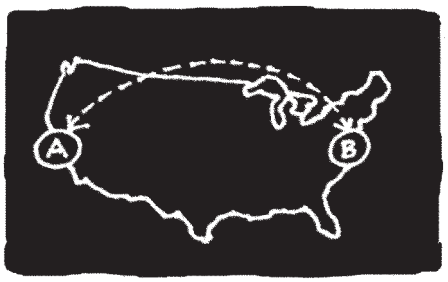
To find out more about the poll and get information about how to prepare for a hurricane, visit the Web site at *www.hurricanesafety.org/*.

More Communities Getting Wise about Wildfire

The devastating effects of wildfires that have recently burned in Texas and other states underscore the need for residents to take action now to protect their communities from wildfire. Through the Firewise Communities/USA program, many communities are doing just that. In 2005, 48 new communities received national distinction and recognition as Firewise Communities/USA sites, increasing program participation by 50 percent over the previous year. There are now 147 Firewise Communities/USA sites in 31 states that are home to more than 185,000 people.

As part of the Firewise program, the Firewise Communities/USA program encourages residents to work with local fire staff to identify wildfire hazards and implement tailored mitigation programs. State forestry and other land management agencies play an integral role in the program, assisting communities with hazard assessment and local plan development. The program is a project of the National Wildfire Coordinating Group's Wildland/Urban Interface Working Team, an interagency program designed to encourage local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from the risk of wildfire.

For more information on the Firewise Communities/USA program, including how to become firewise, visit *www.firewise.org/usa/*.



Conferences and Training

Below are the most recent conference announcements received by the Natural Hazards Center. A comprehensive list of hazards/disaster meetings is available at *www.colorado.edu/hazards/conf.html*.

Northeast Hurricane Conference. Organizer: Insurance Information Institute. **New York, New York: July 19, 2006**. The goals of this conference are to communicate the risk of a catastrophic hurricane in the Northeast and New England; to facilitate coordination and discussion among insurance organizations, emergency management agencies at all levels of government, and others about actions that need to be taken; and to encourage preparedness. To learn more, contact the *Insurance Information Institute, 110 William Street, New York, NY 10038; (212) 346-5500; e-mail: liliag@iii.org; www.iii.org/media/met/nehurricane/*.

Topics in Public Health Preparedness. Sponsor: University of California, Los Angeles (UCLA), Center for Public Health and Disasters. **Lake Tahoe, California: July 20-21, 2006**. This series for public health professionals includes two one-day workshops, Conducting a Hazards Risk Assessment and Risk Communication: Working in a Joint Information Center. To learn more, contact *Chara Burnstein, UCLA; (310) 794-0864; e-mail: cphdevents@ucla.edu; www.cphd.ucla.edu/*.

Doctors for Disaster Preparedness Annual Meeting. **Portland, Oregon: August 4-7, 2006**. Doctors for Disaster Preparedness promotes homeland defense and preparedness for disasters of all kinds, including war and terrorism. The annual meeting brings together experts on strategic and civil defense and prominent scientists to speak about real threats and manufactured scares. The theme of this year's conference is "The Challenges Ahead: Will Sound Science Prevail?" To learn more, contact *Doctors for Disaster Preparedness, 1601 North Tucson Boulevard #9, Tucson, AZ 85716; (520) 325-2680; www.oism.org/ddp/*.

2006 Annual ESRI International User Conference: GIS—Communicating Our World. **San Diego, California: August 7-11, 2006**. This conference will bring together members of the geographic information systems (GIS) community to discuss what is new and what is next for GIS in their region or industry. Session tracks include Technology, Science and Modeling, and Industry. To learn more, e-mail *uc@esri.com; www.esri.com/events/uc/*.

32nd Annual North American Victim Assistance Conference. **Host: National Organization for Victim Assistance (NOVA)**. **Orlando, Florida: August 20-25, 2006**. This annual event is for victim assistance and disaster professionals, survivors, and grassroots groups lobbying for change and for others providing crisis intervention and support services. It is also for the victims' allies in professions such as justice, health and mental health, the spiritual community, education, and research. To learn more, contact *NOVA, 510 King Street, Suite 424, Alexandria, VA 22314; (703) 535-6682; www.trynova.org/conference/2006/*.

World Water Week in Stockholm. Presenter: Stockholm International Water Institute. **Stockholm, Sweden: August 20-26, 2006**. "Beyond the River—Sharing Benefits and Responsibilities" is the theme of this annual international meeting for capacity building, partnership building, and followup on the implementation of international processes and programs in water and development. To learn more, contact *Stockholm International Water Institute; +46 (0)8 522 139 60; e-mail: sympos@siwi.org; www.worldwaterweek.org/*.

30th International Conference on Coastal Engineering (ICCE). Organizers: Local Organizing Committee of ICCE 2006 and Coasts, Oceans, Ports, and Rivers Institute of the American Society of Civil Engineers. **San Diego, California: September 3-8, 2006**. This conference will bring together coastal engineers from around the world to discuss coastal engineering-related research, design, and case studies. To learn more, contact the *ICCE Conference Secretariat, Diane Dennell, BETA Inc., PO Box 4219, Santa Barbara, CA 93140-4219; (805) 965-6210; e-mail: info@icce2006.com; www.icce2006.com/*.

6th Annual Meeting of the European Meteorological Society (EMS)/6th European Conference on Applied Climatology (ECAC). Organizers: EMS and European Climate Support Network. **Ljubljana, Slovenia: September 4-6, 2006**. This conference will consist of scientific, oral, and poster presentations as well as symposia and special lectures. The four primary programs are the 6th ECAC, Instrumentation and Methods of Observation, Atmosphere and the Water Cycle—A Real-Time Look, and Information Provision and Education. To learn more, contact the *Copernicus Meeting Office, Max-Planck-Strasse 13, 37191 Katlenburg-Lindau, Germany; +49 5556 1440; e-mail:*

meetings@copernicus.org; http://meetings.copernicus.org/ems2006/.

Floodplain Management Association 2006 Annual Conference. **Coronado, California: September 5-8, 2006**. The theme for this year's conference is "Challenges in Sustainable Floodplain Management and Development." The technical component of the conference will include contributions in areas such as mitigation planning, postdisaster response, mapping, and public education and outreach. To learn more, e-mail the *Floodplain Management Association* at *admin@floodplain.org; www.floodplain.org/*.

Disaster Mental Health Conference. Organizer: Disaster Mental Health Institute at the University of South Dakota. **Rapid City, South Dakota: September 7-9, 2006**. "Innovations in Disaster Psychology 2006: Culturally Responsive Disaster Mental Health" is the theme for this conference intended for disaster mental health professionals and health and mental health professionals. The overall objective is for participants to learn more about cultural responsiveness and sensitivity in disaster psychology. To learn more, contact the *Disaster Mental Health Institute, University of South Dakota, SDU 114, 414 East Clark Street, Vermillion, SD 57069; (605) 677-6575; e-mail: dmhi@usd.edu; www.usd.edu/dmhi/conference.cfm*.

International Conference on Earthquake Engineering. Sponsor: University of Engineering and Technology Department of Civil Engineering, Lahore. **Lahore, Pakistan: September 8-9, 2006**. This conference will unite civil engineers, architects, and geoscientists to discuss developments in earthquake engineering and to incorporate new construction technologies for the mitigation of hazards. Topics will include engineering seismology, low-cost earthquake-resistant houses, challenges in design and construction of multistory buildings, rehabilitation and retrofitting of structures, codes of practice and construction standards, and temporary shelters for those made homeless by disasters. To learn more, e-mail *icee@uet.edu.pk; www.uet.edu.pk/icee/*.

American Public Works Association (APWA) International Public Works Conference and Exhibition. **Kansas City, Missouri: September 10-13, 2006**. This event will include sessions on stormwater and flood control, snow and ice, emergency management, the importance of disaster planning, and engineering solutions for vulnerable geographic areas. To learn more, contact the *APWA, 2345 Grand Boulevard, Suite 500, Kansas City, MO 64108; (800) 848-2792; e-mail: congress@apwa.net; www.apwa.net/Meetings/Congress/2006/*.

International Conference on Infrastructure Development and the Environment. Host: International Society for Environmental Geotechnology (ISEG). **Abuja, Nigeria: September 10-15, 2006**. This sustainable development conference will bring together infrastructure development experts, environmental professionals, educators, basic and applied scientists, and policy makers in economic sectors such as mining, natural resources, petrochemicals development, agriculture, transportation, and civil/industrial construction to present new information and formulate planning and implementation strategies addressing the environmental impacts of industrial/civil activities. To learn more, contact *Erin Gross; (704) 687-3233; e-mail: giees@email.uncc.edu; www.iseg.giees.uncc.edu/abuja2006/*.

Fire-Rescue International 2006. Presenter: International Association of Fire Chiefs (IAFC). **Dallas, Texas: September 14-16, 2006**. This national conference is structured to meet the needs of all levels of the fire service. Workshops will focus on improving firefighter health and safety and fire and rescue roles in major disasters. To learn more, contact *Megan Kutner, IAFC; (703) 273-9815 x341; e-mail: conferences@iafc.org; www.iafc.org/displaycommon.cfm?an=1&subarticlenbr=356*.

2006 International Code Council (ICC) Annual Conference and Code Development Hearings. **Lake Buena Vista, Florida: September 17-30, 2006**. This conference and expo for building safety and fire prevention professionals will include an education program, legislative forum, international forum, and code development hearings. To learn more, contact *Jackie Claus, ICC; (888) 422-7233 x4226; e-mail: Jclaus@iccsafe.org; www.iccsafe.org/news/annual/2006Conference/*.

Oceans '06 MTS/IEEE: Revolutionizing Marine Science and Technology. Organizers: Marine Technology Society (MTS) and Institute of Electrical and Electronics Engineers (IEEE). **Boston, Massachusetts: September 18-21, 2006**. The technical program of this event will emphasize the traditional core areas of marine science and technology development and include topics such as Ocean Data Visualization, Modeling, and Information Management and Marine Law, Policy, Management, and Education. Researchers from academia, industry, and government are encouraged to attend. To learn more, e-mail *info@oceans2006americas.org; www.oceans06mtsieeeboston.org/*.

NEMA 2006 Annual Conference. Organizer: National Emergency Management Association (NEMA). **Orange Beach, Alabama: September 18-22, 2006**. This conference provides an opportunity for emergency managers to meet to discuss the many challenges that face the community today, share solutions, grow professionally, and network with peers. Attendees will hear from those involved in shaping the future of homeland security and emergency management, strengthen relationships with partner organizations, and discuss NEMA's views on all-hazards emergency preparedness with the leadership in Washington. To learn more, visit *www.nemaweb.org/?1590*.

2006 National Association of Emergency Medical Technicians (NAEMT) Annual Meeting and EMS Expo. **Las Vegas, Nevada: September 25-29, 2006**. The annual meeting of the NAEMT is dedicated to expanding emergency medical services (EMS) knowledge and education and to enhancing professional development. The expo will bring the EMS community together and provide an oppor-

tunity to update skills, learn about new developments and techniques, and network with EMS providers from across the United States and the world. To learn more, call *(800) 827-8009; www.naemt.org/annualMeetingAndExpo/*.

6th Emergency Management Conference: Transport and Emergencies. Organizer: Emergency Services Foundation. **Melbourne, Australia: September 26-27, 2006**. This annual conference unites emergency management professionals from emergency services organizations; local, state, and federal governments; community groups; and industry. This year's focus will be on the impact of emergencies on transport services and infrastructure and the impact that transportation can have upon emergencies. To learn more, contact *High Profile Exhibitions, PO Box 40, Hampton VIC 3188; +(03) 9533 1000; e-mail: info@hpe.com.au; www.hpe.com.au/emergservices/introduction.html*.

44th Annual Conference of the Urban and Regional Information Systems Association (URISA). **Vancouver, British Columbia: September 26-29, 2006**. This conference aims to generate discussion and debate about improving urban and regional environments through information technology. The program will contemplate issues related to designing, managing, and applying information technology. Participants will represent community and economic development, homeland security and emergency services, environmental management, public works, and public health and safety. To learn more, contact *URISA; (847) 824-6300; e-mail: info@urisa.org; http://urisa.org/conferences/aboutannual*.

International Snow Science Workshop (ISSW). Organizer: San Juan Field School. **Telluride, Colorado: October 1-6, 2006**. This workshop will bring together snow scientists and avalanche practitioners to discuss theories, present papers, and explore innovative new research topics. The theme of this year's workshop is "A Merging of Theory and Practice." To learn more, contact *ISSW, PO Box 3260, Telluride, CO 81435; (970) 728-3829; e-mail: info@issw.net; www.issw.net/*.

Third Annual Symposium of the Canadian Risk and Hazards Network. **Montreal, Quebec: October 11-13, 2006**. The theme for this event is "A Dynamic Risk Management Partnership: Lead by Example." The main objective of the symposium is to share experiences and best practices in emergency management. Researchers and practitioners in social sciences and physical sciences are invited to attend. To learn more, e-mail *crhnet2006@uqam.ca; www.geo.uqam.ca/crhnet2006/crhnet2006en.htm*.

6th International Disaster and Emergency Resilience (IDER) Conference and Exhibition. Sponsors: International Association of Emergency Managers, the Institute of Civil Defence and Disaster Studies, and European Training and Simulation Association. Host: Italian Fire Service College. **Rome, Italy: October 11-13, 2006**. A goal of IDER is to identify and implement best practices for readiness, response, and recovery for disasters and major emergencies. To learn more, contact *Andrich International, 51 Market Place, Warminster BA12 9AZ, UK; +44 1985 846181; e-mail: ider@andrich.com; www.iderweb.org/*.

8th Plinius Conference on Mediterranean Storms and Extreme Events in an Era of Climate Change. Presenter: European Geosciences Union. **Dead Sea, Israel: October 17-20, 2006**. This conference will provide an interdisciplinary forum for the discussion of the state of knowledge on Mediterranean storms and extreme events. Topics will include observation analysis, modeling and future forecasting of heat and cool waves, windstorms, floods, flash floods, slow and fast moving landslides, coastal erosion, and sedimentation. To learn more, contact *Karyn Nahari Plinius, c/o Target Conferences, PO Box 29041, Tel Aviv 61290, Israel; +972 3 517 5150; e-mail: plinius8@targetconf.com; http://meetings.copernicus.org/plinius8/*.

Geological Society of America (GSA) Annual Meeting. **Philadelphia, Pennsylvania: October 22-25, 2006**. At this meeting, scientists, educators, and policy makers from around the world will share advances and discoveries and work to improve the understanding and application of science in society. The meeting will feature field trips, sessions, special symposia, and a public forum. To learn more, contact *GSA Meetings Department, PO Box 9140, Boulder, CO 80301-9140; (303) 357-1090; e-mail: meetings@geosociety.org; www.geosociety.org/meetings/2006/*.

Conserving and Restoring Frequent Fire Landscapes of the West: Linking Science, Collaboration, and Practice. Host: Ecological Restoration Institute at Northern Arizona University. **Flagstaff, Arizona: October 24-26, 2006**. Land managers, stakeholders, and scientists will attend this conference to work on integrating science, collaboration, and management practice. Specific topics will include hazardous fuels reduction, postfire rehabilitation, addressing threats to natural resource sustainability, restoring human and wildlife habitats, enhancing watershed function, and providing for the economic vitality of natural resource dependent communities. To learn more, contact *Ecological Restoration Institute, PO Box 15017, Flagstaff, AZ 86011-5017; (928) 523-7182; e-mail: eri-conference@for.nau.edu; www.eri.nau.edu/cms/content/view/740/952/*.

American Water Resources Association (AWRA) 2006 Annual Water Resources Conference. **Baltimore, Maryland: November 6-9, 2006**. This conference is an opportunity for water resource practitioners from diverse disciplines to gather to discuss water resource-related research and project case studies. In addition to offering a broad range of technical, social, and legal topics, a number of sessions will focus on current topics, including infrastructure asset management, watershed management, dam rehabilitation or removal, sustainability of drinking water supplies, drought and flood management, and ecological restoration of wetlands and stream corridors. To learn more, contact *Patricia Reid, AWRA, PO Box 1626, Middleburg, VA 20118; (540) 687-8390; e-mail: pat@awra.org; www.awra.org/meetings/Baltimore2006/*.

34th Regional Training Course on Disaster Management. Organizer: Asian Disaster Preparedness Center (ADPC). **Bangkok, Thailand: November 6-24, 2006**. The purpose of this course is to provide comprehensive disaster management knowledge and skills to enhance the capabilities of professionals in disaster management, development, and donor agencies to effectively integrate disaster management into development programs and policies. To learn more, contact the *Training and Education Division, ADPC, Asian Institute of Technology, PO Box 4, Klong Luang, Pathumthani 12120, Thailand; e-mail: tedadpc@adpc.net; www.adpc.net/training/brochure/DMC-34brochure.pdf*.

Asian Seismological Commission (ASC) VI General Assembly. **Bangkok, Thailand: November 7-10, 2006**. The ASC 2006 symposium is titled "Earthquake and Tsunami Disaster Preparedness and Mitigation." It will focus on increasing understanding of the physical processes of the 2004 Indian Ocean earthquake and tsunami, exchanging information on new research and technology, strengthening multidisciplinary cooperation in earthquake and tsunami disaster preparedness and mitigation, and enhancing the observation networks and data exchanges in the Asia Pacific and Indian Ocean regions. To learn more, e-mail *asc2006_loc@yahoo.co.th; http://asc1996.netfirms.com/asc2006/*.

2006 Disaster Mental Health Conference. Presenter: Rocky Mountain Region Disaster Mental Health Institute. **Casper, Wyoming: November 8-11, 2006**. The general theme of this conference is "Taking Charge in Troubled Times: Response, Resilience, Recovery, and Follow-up." Topics will include cultural issues, ethnicity, political concerns, religious considerations, children, and mitigation, among others. To learn more, contact the *Rocky Mountain Region Disaster Mental Health Institute, PO Box 786, Laramie, WY 82073-0786; (307) 399-4818; e-mail: rockymountain@mail2emergency.com; www.rmrinstitute.org/*.

Global Environmental Change: Regional Challenges—An Earth System Science Partnership (ESSP) Global Environmental Change Open Science Conference. **Beijing, China: November 9-12, 2006**. The purpose of this event is to present progress in the understanding of the natural and social systems of global environmental change. Conference topics will include Earth System Science Approach, Science for Sustainability, Integrated Regional Studies, and Global Change in Monsoon Asia. The Second International Young Scientists' Global Change Conference will take place prior to the main conference on November 7-8. To learn more, contact *Martin Rice, ESSP; e-mail: mrice@essp.org; www.essp.org/essp/ESSP2006/*.

Fire Related Research and Developments: Annual Conference at the Fire Service College. **Moreton-in-Marsh, United Kingdom: November 15-16, 2006**. This conference will include participants from across the emergency services, the fire industry, research communities, and other private and public organizations interested in the latest fire-related issues, developments, and concerns. A broad range of backgrounds and professional approaches, including technical, legal, social, psychological, economic, and operational, as well as national and international perspectives, will be represented. To learn more, contact *Anne Eyre, Trauma Training, PO Box 2590, Leamington Spa, Warks CV31 1GQ, UK; +01926 427939; e-mail: anne.eyre@traumatraining.com; www.fireservicecollege.ac.uk/Conferences+and+Events/Research+Event/*.

V International Conference on Forest Fire Research. Presenter: University of Coimbra. **Coimbra, Portugal: November 27-30, 2006**. The purpose of this conference is to bring together forest fire scientists from around the world to discuss the latest advances in research and methodologies and results and increase international cooperation. The conference will include formal sessions, keynote lectures, oral paper presentations, and poster sessions. To learn more, contact the conference secretariat at *+351 239790732; e-mail: icffr@dem.uc.pt; www.adai.pt/icffr/*.

3rd National Conference on Coastal and Estuarine Habitat Restoration. Presenter: Restore America's Estuaries. **New Orleans, Louisiana: December 9-13, 2006**. This conference will offer presentations on best practices in the science, planning, practice, and policies of coastal ecosystem restoration throughout the United States and, especially, in coastal Louisiana and along the northern Gulf Coast. It will showcase habitat restoration at all scales and the latest advances in ecosystem and community-based restoration. To learn more, contact *Steve Emmett-Mattox; (303) 652-0381; e-mail: sem@estuaries.org; www.estuaries.org/?id=4*.

American Geophysical Union (AGU) Fall Meeting. **San Francisco, California: December 11-15, 2006**. This meeting provides an opportunity for more than 12,000 researchers, teachers, students, and consultants to present and review the latest issues affecting the Earth, the planets, and their environments in space. It will cover topics in all areas of Earth and space sciences, including seismology, volcanology, atmospheric sciences, hydrology, and ocean sciences. To learn more, contact the *AGU Meetings Department, 2000 Florida Avenue NW, Washington, DC 20009; (800) 966–2481; e–mail: fm-help@agu.org; www.agu.org/meetings/fm06/*.

An International Perspective on Environmental and Water Resources. Organizer: Environmental and Water Resources Institute of the American Society of Civil Engineers. **New Delhi, India: December 18-20, 2006**. This conference will feature a wide variety of sessions related to water resources and the environment, such as Global Climate Change and Effect on Water Resources and the Environment, 2004 Tsunami: Impacts on Water Resources and the Environment, and Socioeconomic Issues in Water Resources Development. While technical sessions will include topics on both developed and developing countries, much of the focus will be on water resources and the environment in developing countries, especially in Asia. Participants will include engineers, scientists, and planners from around the world. To learn more, e-mail *ewri@asce.org; www.asce.org/conferences/india06/*.

Internet Pages

Below are new or updated Internet resources that Natural Hazards Center staff members have found to be informative and useful. Other valuable resources can be found throughout this newsletter. For a more complete list, visit *www.colorado.edu/hazards/resources/sites.html*.

All Hazards

www.law.berkeley.edu/library/disasters.html
Disasters and the Law: Katrina and Beyond is a new site from the Law Library at the University of California, Berkeley, featuring information related to the law's role in natural hazards mitigation and disaster preparedness, response, and recovery.

www.floods.org/PDF/ASFPM_PDM_White_Paper_0306.pdf
This white paper from the Association of State Floodplain Managers, ***Improving the Pre-Disaster Mitigation Program***, is based on comments from ASFPM members and mitigation professionals across the nation. It summarizes the recommendations of these experts for improving the Federal Emergency Management Agency's Pre-Disaster Mitigation Program.

www.fas.org/sgp/crs/homesec/RL33369.pdf
Federal Emergency Management and Homeland Security Organization: Historical Developments and Legislative Options from the Congressional Research Service reviews the establishment and evolution of federal emergency management organizational arrangements since the end of World War II and briefly summarizes current legislative proposals.

www.heritage.org/Research/HomelandDefense/bg1923.cfm
This Heritage Foundation report, ***Learning from Disaster: The Role of Federalism and the Importance of Grassroots Response*** by James Jay Carafano and Richard Weitz, discusses the role of the federal government and the role that nongovernmental organizations, private sector initiatives, and individual civic deeds play during extreme emergencies.

www.heritage.org/Research/HomelandDefense/SR06.cfm
Empowering America: A Proposal for Enhancing Regional Preparedness, a report from The Heritage Foundation, focuses on the importance of regional preparedness to building a national response system that allows local communities, states, and the federal government to work together during a catastrophic disaster.

www.tisp.org/news/newsdetails.cfm?&newsID=727
The Infrastructure Security Project's ***Guide for an Action Plan to Develop Regional Disaster Resilience*** provides a framework for governments, service providers, and other involved organizations. The focus is on multihazards, with the goal of sensibly and cost-effectively securing interdependent cyber and physical critical infrastructures.

www.unisdr.org/asiapacific/asiapacific-index.htm
This new site from the United Nations International Strategy for Disaster Reduction provides information related to regional activities, events, and publications for the Asia and Pacific region and highlights achievements and progress made.

http://sciencepolicy.colorado.edu/admin/publication_files/resource-2449-2006.02.pdf
This paper by Roger Pielke Jr., ***Disasters, Death, and Destruction: Accounting for Recent Calamities***, was presented at the Ocean Studies Board of the National Academies' Sixth Annual Roger Revelle Commemorative Lecture.

www2.ku.edu/~rrtcpbs/
This site describes the Nobody Left Behind project, a three-year study by researchers at the University of Kansas on how 30 U.S. counties and cities identified and planned for people with mobility impairments during disasters.

www.washington.edu/admin/business/oem/special_needs_resources/
The ***University of Washington Seattle Campus Report on Emergency Preparedness for Special Needs Populations*** is available here along with other information about special needs emergency preparedness.

http://hazardcenter.louisville.edu/pdfs/wp0601.pdf
The working paper "Measurement and Indicators for Disasters: Topical Bibliography" by David M. Simpson and Matin Katirai is available from the Center for Hazards Research and Policy Development at the University of Louisville.

www.empower-women.com/pages/1/
Emergency Management Professional Organization for Women's Enrichment (EMPOWER) was established to provide a forum to strengthen the presence and excellence of women in emergency management. This Web site was created to bring professionals together to share experiences, build skills, and expand and deepen industry knowledge.

www.nga.org/Files/pdf/0604HLSDIRSURVEY.pdf
This issue brief from the National Governors Association Center for Best Practices discusses the findings from its second annual survey of state homeland security directors, which was administered to gauge organizational progress in key areas, including governance and strategy, coordination between government and the private sector, and operations.

www.do1thing.us/
Do 1 Thing is a 12-month preparedness program developed by a collaboration of governments and nongovernmental organizations in three Michigan counties. It focuses on a different area of preparedness each month and provides a range of options for each topic, moving individuals through the process of disaster preparedness from awareness to intention to action.

www.podcast.noaa.gov/
The National Oceanic and Atmospheric Administration (NOAA) now offers NOAA Podcasts, short audio reports on NOAA science and research, for free download.

www.library.dau.mil/CRS_RL33089.pdf
Education and Training Issues Related to Major Disasters from the Congressional Research Service provides a general overview of the federally funded programs administered by the U.S. Department of Education and the training programs of the U.S. Department of Labor that might be used to help those affected by Hurricanes Katrina and Rita.

www.zeneb.uni-bayreuth.de/home.htm
This site of the Centre for Natural Risks and Development at the University of Bayreuth in Germany provides information on current debates, projects, and meetings in social-science oriented hazards and disasters research in developing countries.

Floods and Hurricanes

http://ks.water.usgs.gov/Kansas/floodsummary/
The U.S. Geological Survey (USGS) has made national flood summary maps and data from 1970-1998 available on their Kansas Water Science Center Web site, which provides a tool to compare current or possible flood conditions with past historical flood information by state and year.

www.rms.com/Publications/60HUActivityRates_whitepaper.pdf
Risk Management Solutions (RMS) has updated its U.S. and Caribbean hurricane models with a five-year forward-looking view of risk for estimating potential catastrophe losses. ***U.S. and Caribbean Hurricane Activity Rates: The New RMS Medium-Term Perspective & Implications for Industry Loss*** describes the methodology, which indicates that increases in hurricane frequencies should be expected in all Atlantic and Gulf Coast states.

www.ibhs.org/newsroom/view.asp?id=478
The Institute for Business & Home Safety (IBHS) has released three new resources to help homeowners protect their homes from hurricanes: "'S' Marks the Spot," a hurricane protection guide, "Manufactured Home Inspection Checklist," and "Keep Wind and Water Out, A Guide to High Wind Protection."

www.nasa.gov/vision/earth/lookingatearth/hurricane_posters.html
Two new hurricane posters are available for download from the National Aeronautics and Space Administration (NASA). One features Hurricane Katrina and the other highlights the various components of a hurricane as observed by satellites.

www.gnocdc.org/
The Greater New Orleans Community Data Center Web site provides information about the New Orleans area. Since Hurricane Katrina, it has been providing population and housing estimates, maps, and links to hurricane impact and recovery reports to help inform recovery decisions. Also available here is ***Hurricane Katrina: Social Demographic Characteristics of Impacted Areas***, a Congressional Research Service report.

www.louisianaspeaks.org/
Louisiana Speaks is a multifaceted planning process endorsed by the Louisiana Recovery Authority to develop a sustainable, long-term vision for south Louisiana following Hurricanes Katrina and Rita. This Web site features information on planning and a Parish Planning Recovery Tool that enables all stakeholders to access the planning process.

www.utc.org/file_depot/0-10000000/0-10000/1013/conman/Hurricanes+of+2005.pdf
Hurricanes of 2005: Performance of Gulf Coast Critical Infrastructure Communications Networks contains the findings of a survey of Gulf Coast utilities after Hurricanes Katrina, Rita, and Wilma conducted by the United Telecom Council.

www.huduser.org/publications/destech/hurricanes05.html
The U.S. Department of Housing and Urban Development Office of Policy Development and Research offers this list of publications and ordinances to help those involved in the Gulf Coast hurricane recovery to develop sound, affordable housing.

www.cbpp.org/2-23-06hous.htm
Housing Needs of Many Low-Income Hurricane Evacuees Are Not Being Adequately Addressed, from the Center on Budget and Policy Priorities, makes recommendations for the federal government to help meet the housing needs of poor residents displaced by the 2005 hurricanes.

www.oxfamamerica.org/newsandpublications/publications/briefing_papers/recovering_states/
Recovering States? The Gulf Coast Six Months Later from Oxfam America found that poor households are being left behind in the recovery efforts and urges officials to recommit to plans that address the region's deep and persistent poverty.

www.nclr.org/content/publications/detail/36812/
In the Eye of the Storm: How the Government and Private Response to Hurricane Katrina Failed Latinos, a recent report from the National Council of La Raza, reports that the federal government and American Red Cross are unprepared to address the varying needs of diverse populations in a disaster and recommends ways to improve response.

www.laseagrant.org/hurricane/
The Louisiana Hurricane Resources Web site, hosted by the Louisiana Sea Grant College Program, offers information about storm preparedness and recovery as well as archived information about Hurricanes Katrina and Rita.

www.firstresponsecoalition.org/docs/Hurricane-Interop-Paper.pdf
The Imminent Storm 2006: Vulnerable Emergency Communications in Eight Hurricane Prone States from the First Response Coalition is based on an evaluation of the post-Katrina status of communications interoperability in eight states.

www.publicintegrity.org/katrina/report.aspx?aid=484
This Center for Public Integrity Web page links to 928 pages of e-mails to and from former Federal Emergency Management Agency director Michael Brown between August 26 and September 8, 2005.

Earthquakes

http://mitigation.eeri.org/files/Developing.a.Scenario.pdf
The Earthquake Engineering Research Institute's ***Guidelines for Developing an Earthquake Scenario*** describes how to create an earthquake scenario in any community with seismic risk to increase public awareness and stimulate mitigation planning.

http://earthquake.usgs.gov/eqcenter/eqinthenews/2006/uskyae/
http://earthquake.usgs.gov/eqcenter/eqinthenews/2006/usneb6/
These preliminary reports from the U.S. Geological Survey National Earthquake Information Center provide details on the magnitude 6.1 earthquake in western Iran on March 31 and the 6.3 magnitude earthquake in Java, Indonesia, on May 26.

www.1906eqconf.org/mediadocs/BigonestrikesReport.pdf
www.1906eqconf.org/mediadocs/managingrisk.pdf
These two documents are based on a study commissioned by the Earthquake Engineering Research Institute, Seismological Society of America, and the California Governor's Office of Emergency Services: ***When the Big One Strikes Again: Estimated Losses due to a Repeat of the 1906 San Francisco Earthquake*** and ***Managing Risk in Earthquake Country: Estimated Losses for a Repeat of the 1906 San Francisco Earthquake and Earthquake Professionals' Action Agenda***.

www.rms.com/Publications/2006_SF_EQ_SuperCat.pdf
The 1906 San Francisco Earthquake and Fire: Perspectives on a Modern Super Cat from Risk Management Solutions examines the potential economic and insured losses from a repeat of the 1906 earthquake in the San Francisco Bay Area.

www.usgs.gov/homepage/science_features/plw_1906.asp
This edition of the U.S. Department of the Interior's ***People, Land, and Water*** commemorates the 1906 earthquake, documents the birth and growth of U.S. earthquake science, and demonstrates how the science helps safeguard communities.

Tsunamis

www.nap.edu/catalog/11619.html
This report summarizes the June 21, 2005, National Academies' Disasters Roundtable: The Indian Ocean Tsunami Disaster: Implications for U.S. and Global Disaster Reduction and Preparedness. Participants considered implications of the disaster for implementing effective tsunami mitigation, detection, warning, and emergency response systems and multihazard mitigation and preparedness as well as U.S. initiatives and how they are expected to tie into regional and global efforts.

www.rms.com/Publications/IndianOceanTsunamiReport.pdf
Managing Tsunami Risk in the Aftermath of the 2004 Indian Ocean Earthquake and Tsunami by Risk Management Solutions provides an in-depth analysis of the global tsunami hazard and mitigating coastal risk.

http://pubs.usgs.gov/fs/2006/3012/
This U.S. Geological Survey/National Oceanic and Atmospheric Administration fact sheet describes an effort to improve earthquake and tsunami monitoring along coasts of the Caribbean Sea, the Gulf of Mexico, and the Atlantic Ocean.

Wildfire

www.nps.gov/fire/utility/uti_timeline.html
The National Park Service Fire and Aviation Division prepared this presentation on fire management history. It includes a time line from 1600 to present of large fires and fatalities, operational inventions and developments, policy and law, wildland fire operations, and research, education, and public awareness.

www.frftp.org/
Colorado's Front Range Fuels Treatment Partnership is an interagency program that reduces wildland fire risks through fuels treatments that are economically feasible, socially acceptable, and ecologically sustainable. This Web site includes research and community links and information on community wildfire protection plans, fuels reduction, and fire education. A new report, ***Living with Fire: Protecting Communities and Restoring Forests—Findings and Recommendations of the Front Range Fuels Treatment Partnership Roundtable***, is also available.

www.iawfonline.org/pdf/Infamous_World_Fires.pdf
The International Association of Wildland Fire has compiled this list by calendar date of infamous, multiple fatality wildland fires around the world over the last 150 years.

Health

www.astho.org/pubs/KatrinaReportsSummary.pdf
A Summary of Four After-Action Reports on Hurricane Katrina by the Association of State and Territorial Health Officials reviews Hurricane Katrina reports from the White House, the U.S. House of Representatives, the U.S. Senate, and the Government Accountability Office to aid in understanding the public health implications of their proposed actions.

www.atsdr.cdc.gov/2p-emergency-response.html
"The Importance of Evidence-Based Disaster Planning" by Erik Auf der Heide was published in January's ***Annals of Emergency Medicine*** and is available here for free download. The article examines several common assumptions about disasters, compares them with research findings, and discusses the implications for planning as they pertain to disaster medicine.

www.cdc.gov/mmwr/PDF/ss/ss5502.pdf
The April 7 issue of the Centers for Disease Control and Prevention's ***Morbidity and Mortality Weekly Report*** features "Surveillance for World Trade Center Disaster Health Effects Among Survivors of Collapsed and Damaged Buildings." It presents the initial findings from the World Trade Center Health Registry, which was established to monitor the status of September 11 survivors, and details a variety of health concerns from the more than 70,000 enrollees.

www.cdc.gov/mmwr/preview/mmwrhtml/mm5516a4.htm
The April 28 issue of the Centers for Disease Control and Prevention's ***Morbidity and Mortality Weekly Report*** features "Health Hazard Evaluation of Police Officers and Firefighters After Hurricane Katrina—New Orleans, Louisiana, October 17-28 and November 30-December 5, 2005." Approximately one third of the respondents in the evaluation reported either depressive symptoms, symptoms of post-traumatic stress disorder, or both.

Contracts and Grants

Below are descriptions of recently awarded contracts and grants related to hazards and disasters. An inventory of awards from 1995 to the present is available at *www.colorado.edu/hazards/resources/grants/*.

WebTrack—Learning Geographical Movements of Social Networks through the Web. Funding Organization: National Science Foundation, 18 months, $94,227. Principal Investigator: *Sheila Tejada, Tulane University, Department of Electrical Engineering and Computer Science, 202 Stanley Thomas Hall, New Orleans, LA 70118; (504) 865-5785; e-mail: tejada@eecs.tulane.edu; www.eecs.tulane.edu/tejada/katrina/*.

Hurricane Katrina disrupted many social networks. A "burst" of new data sources, generated on the Web by disaster relief organizations, news outlets, employers, and hurricane survivors, aided those affected by the storm in searching for members of their social groups. This project will investigate methods to automate tracking the geographical movements of social networks using the variety of information sources available on the Web.

Canadian Mass Death Network. Funding Organization: Canadian Social Science and Humanities Research Council, three years. Principal Investigator: *Joseph Scanlon, Carleton University; e-mail: jscanlon@css.carleton.ca*.

This project will look at and report on how Canada has dealt with mass-death incidents that occurred in Canada as well as those that occurred outside of Canada that involved large numbers of Canadians. Incidents will include natural disasters, such as the 1987 Edmonton tornado, as well as terrorist incidents, such as the 1985 bombing of Air India 182 that departed from Canada. Other investigators are Tanya Peckman, Kirsten Kramar, and Christopher Stoney.

Geomorphic and Human Consequences of the October 8, 2005, Northern Pakistan Earthquake. Funding Organization: National Science Foundation, one year, $29,150. Principal Investigator: *Lewis A. Owen, University of Cincinnati, Department of Geology, PO Box 210013, Cincinnati, OH 45221; (513) 556-3732; e-mail: lewis.owen@uc.edu*.

Assessing the topographic and human consequences of an event such as the October 2005 earthquake in Pakistan is essential for remediation and seismic hazard mitigation. This research includes identification and assessment of the topographic and human consequences of the earthquake, development of geologic and medical strategies for immediate remediation in the region, characterization of the nature of earthquake-induced landforms, assessment of the importance of tectonic-induced earth surface processes and landforms for the short- and long-term landscape evolution of Himalayan environments, production of hazard maps for the region, and proposed strategies for relief and remediation in the likelihood of future earthquakes.

Fire Information from REmote-sensing and Weather-models Integrated and Supplied to End-users (FIREWISE). Funding Organization: National Science Foundation, six months, $96,356. Principal Investigator: *Robert Crabtree, HyPerspectives Inc., 2048 Analysis Drive, Bozeman, MT 59718; (406) 556-9880; e-mail: crabtree@hyperspectives.net*.

This Small Business Innovation Research Phase I research project will demonstrate the feasibility of an interactive software product to improve firefighting, prevention, and restoration capabilities. The product will combine remotely-sensed data from the National Aeronautics and Space Administration with a leading-edge weather model, deliver the resulting data to decision makers visually via the Internet, and create previously unavailable data sets for use by existing fire simulation software.

Linking Geodetic Observations with Gas Emissions to Characterize Magmatic Activity at a Subduction Zone Volcano: Mt. Baker (Washington). Funding Organization: National Science Foundation, two years, $107,039. Principal Investigators: *Juliet Crider (Michael Poland and Glyn Williams-Jones), Western Washington University, Department of Geology, MS 9080, 516 High Street, Bellingham, WA 98225; (360) 650-3589; e-mail: criderj@cc.wwu.edu*.

Research at erupting volcanoes has shown that high surface temperatures, gas emissions, and geodetic and seismic unrest are signatures of magmatic activity at depth. Few studies have correlated such geophysical and geochemical measurements at nonerupting volcanoes. This project is a two-year pilot study to investigate the relationship between volcano degassing and magmatic activity by collecting gas samples and geodetic measurements at Mount Baker volcano, Washington. The goals of this study are to characterize the patterns of gravity change and surface deformation at a quiescent, degassing, subduction zone volcano and evaluate the relationship between gas emission and geodetic changes over time. The investigators hope this research will have a significant benefit to the understanding of volcanic processes and, potentially, hazards.

Linking Landscape Models of Fire, Vegetation, and Global Climate Change in the Florida Everglades. Funding Organization: National Science Foundation, one year, $50,000. Principal Investigator: *Brian Beckage, Department of Botany and Agricultural Biochemistry, University of Vermont, 125 Marsh Life Science Building, Burlington, VT 05405-0086; (802) 656-0197; e-mail: Brian .Beckage@uvm.edu*.

This project will investigate how fire-adapted plant communities facilitate the initiation and spread of fire, while fire-intolerant communities inhibit fire except under extreme meteorological conditions. It will model the behavior of the Everglades ecosystem in response to climatic forcing using a coupled landscape model of vegetation and fire that incorporates external climatic drivers, fire-vegetation feedbacks, and hydrology. It will broaden the theoretical understanding of the potential for climate change to move ecosystems across ecological thresholds that cause rapid shifts in the state of an ecosystem. Identification of these thresholds and their mechanisms will inform land managers of changes that may result from global warming, enabling them to better protect valuable natural resources.

Towards Improving Hurricane Intensity Forecasts. Funding Organization: National Science Foundation, two years, $200,000. Principal Investigator: *T. Krishnamurti, Florida State University, Meteorology Department, 404 Love Building/Meteorology 4520, Tallahassee, FL 32306-4520; (850) 644-2210; e-mail: tnk@met.fsu.edu*.

This study is centered around a suite of mesoscale models to be used for research on a multimodel superensemble for the improvement of hurricane intensity forecasts. It will include data assimilation within global and regional models, prediction experiments from a suite of mesoscale models, definition of the training and forecast phase of a mesoscale multimodel superensemble, and execution of forecasts for these phases. The intent is to examine superensemble-based forecast validations and interpretations of model biases toward hurricane intensity predictions.

NOAA Seeks Partner to Study Resiliency

The National Oceanic and Atmospheric Administration (NOAA) invites applications for a funding opportunity titled FY 2007 Climate and Weather Impacts on Society and the Environment (NOS-CSC-2007-2000686) to establish a cooperative agreement with the agency under the Climate and Weather Impacts on Society and the Environment program. The agreement will be established between the National Climatic Data Center, the Coastal Services Center, the Climate Program Office, and the award recipient to further understanding and increase the resiliency of natural, economic, and social systems to weather and climate-related environmental stressors through interdisciplinary research, information and services delivery, education, and outreach. Applications are due by August 28, 2006. Application packages can be accessed at *www.grants.gov/* or requested from *Shauna Harris, Coastal Services Center, 2234 South Hobson Avenue, Charleston, SC 29405; (843) 740-1149; e-mail: Shauna.Harris@noaa.gov*.

Funding Opportunities from the National Institutes of Health (NIH)

Tools for Mental Health Effects of Disasters

Two announcements solicit Small Business Innovation Research (PA-06-335) and Small Business Technology Transfer (PA-06-336) grant applications from small business concerns for support of research and development of novel, or the enhancement of existing, commercializable products to mitigate or understand the mental health effects brought on or exacerbated by the aftermath of national disasters, such as Hurricanes Katrina and Rita. These tools might be used by researchers, mental health professionals, other health care providers, as well as by those in the broader community, including educators, day care providers, or family members of victims. These tools must take into account the cultural context of the target population to assure their effectiveness and validity. The opening date for application submission is July 1, 2006.

Behavioral and Social Research on Disasters and Health

The purpose of this funding opportunity is to stimulate research in the behavioral and social sciences on the consequences of natural and human-caused disasters for the health of children, the elderly, and vulnerable groups, with an ultimate goal of preventing or mitigating harmful consequences. Three NIH Institutes are sponsoring this program announcement. The National Institute on Aging is interested in research on the elderly in disasters, especially elderly residents of institutions and frail elderly in the community. The National Institute of Child Health and Human Development is interested in research on children and other vulnerable populations in disasters. The National Institute of Nursing Research is interested in research that will develop interventions to improve outcomes for persons affected by natural and human-caused disasters. Three award mechanisms are being used: NIH Small Grant (PA-06-453), NIH Research Project Grant (PA-06-454), and NIH Exploratory/Developmental Grant (PA-06-452). The opening date for application submission is September 5, 2006.

These five NIH funding announcements, and others, can be found online at *http://grants1.nih.gov/grants/guide/pa-files/*.

Recent Publications

Below are brief descriptions of some recent publications on hazards and disasters received by the Natural Hazards Center. Many of these publications are available through local and online booksellers, but information on how to obtain copies directly is also provided.

All Hazards

A Legal Guide to Homeland Security and Emergency Management for State and Local Governments. *Ernest B. Abbott and Otto J. Hetzel, editors. ISBN 1-59031-593-6. 2005. 300 pp. $94.95. Available from the American Bar Association, Publication Orders, PO Box 10892, Chicago, IL 60610-0892; (800) 285-2221; e-mail: orders@abanet.org; www.ababooks.org/.*

Homeland security and emergency management is now such an important responsibility of state and local governments that their attorneys must understand and comply with the changing requirements and new issues to respond to threats of terrorism and natural disasters. This guide covers both the basic structure of the homeland security and emergency management system and presents detailed analysis of specific areas (e.g., applying for federal preparedness funds, negotiating intergovernmental agreements, applying for disaster assistance, and managing the impact of catastrophic events).

National Incident Management System: Principles and Practice. *Donald W. Walsh, Hank T. Christen, Geoffrey T. Miller, Christian E. Callsen Jr., Frank J. Cilluffo, and Paul M. Maniscalco. ISBN 0-7637-3079-3. 2005. 244 pp. $24.95. Available from Jones and Bartlett Publishers, 40 Tall Pine Drive, Sudbury, MA 01776; (978) 443-5000, (800) 832-0034; e-mail: info@jbpub.com; www.jbpub.com/.*

Designed for all emergency response departments, including fire, law enforcement, emergency medical service, hospitals, public works, and private-sector response organizations, this book translates the goals of the original National Incident Management System (NIMS) from concepts into capabilities and provides responders with a step-by-step process to understanding and implementing NIMS. It uses case studies to help readers understand how to effectively incorporate NIMS into their departments or jurisdictions and provides checklists to assist with implementation.

Crisis & Emergency Risk Communication: By Leaders for Leaders. *n.d. 57 pp. Available free online from the Centers for Disease Control; www.cdc.gov/communication/emergency/leaders.pdf.*

This resource gives leaders tools to help them speak to the public, media, partners, and stakeholders during an intense public-safety emergency. Topics include the psychology of communicating in a crisis, the leader's role as a spokesperson, working with media during a crisis, and public health and media law.

Hazards of Nature, Risks to Development: An IEG Evaluation of World Bank Assistance for Natural Disasters. *ISBN 0-8213-6650-5. 2006. 236 pp. Free. Available from the World Bank, Independent Evaluation Group, 1818 H Street NW, Washington, DC 20433; (202) 458-4497; e-mail: eline@worldbank.org; www.worldbank.org/ieg/naturaldisasters/?intcmp=5249794.*

This report is the first ever assessment of World Bank assistance for natural disasters and a comprehensive review of disaster preparedness and response. The report calls for new thinking that integrates predictable disaster risks into development programs and recommends several adjustments to the way the bank currently handles natural disasters. Chapters include Nature, Disaster, and Recovery; The World Bank Responds; Disasters and Bank Strategy; Relevance of Bank Assistance; Social Dimensions of Disaster; Bank Policy: Implementation and Implications; and Conclusions and Recommendations.

Global Catastrophes: A Very Short Introduction. *Bill McGuire. ISBN 0-19-280493-6. 2005. 152 pp. $9.95. Available from Oxford University Press, Direct Sales Department, Saxon Way West, Corby, Northants NN18 9ES, UK; +44 1536 741017; www.oup.com/.*

Written for a general audience, this book focuses on some of the potential catastrophes facing the planet and humankind in the future and looks at the probability of these events happening and our chances of survival. Originally published as ***A Guide to the End of the World***, this edition has been updated following recent events, including the 2004 Indian Ocean tsunami. Coverage extends from discussion of the likely consequences of global warming to the destruction of the earth in the far future. Scenarios include a new Ice Age, asteroid and comet impacts, supervolcanoes, and megatsunamis.

Planning for the Unplanned: Recovering from Crises in Megacities. *Aseem Inam. ISBN 0-415-95130-5. 2005. 256 pp. $29.95. Available from Taylor & Francis Books, Textbook Customer Service, 7625 Empire Drive, Florence, KY 41042; (859) 525-2230, (800) 634-7064; e-mail: cserve@routledge-ny.com; www.routledge-ny.com/.*

This book delves into the systematic features that contribute to the success of planning institutions, noting that in cities filled with uncertainty and complexity, planning institutions effectively tackle unexpected and sudden change by relying on the old and familiar, rather than the new and the innovative. Case studies from Mexico City, Los Angeles, and New York demonstrate urban planning processes.

Emergency Response Planning for Corporate and Municipal Managers. *Paul A. Erickson. Second edition. ISBN 0-12-370503-7. 2006. 432 pp. $69.95. Available from Elsevier, Order Fulfillment, 11830 Westline Industrial Drive, St. Louis, MO 63146; (800) 545-2522; e-mail: usbkinfo@elsevier.com; http://books.elsevier.com/.*

The primary market for this book is students of emergency planning, management, and response; security, disaster recovery, loss prevention, and business continuity professionals and consultants; municipal managers involved in emergency planning and response; and corporate risk management/hazards professionals. The book outlines comprehensive emergency planning and discusses the major elements of an emergency response plan. It also examines types of hazards and risks and discusses issues that must be given special attention in the development and implementation of any emergency response plan.

In the Wake of Disaster: Religious Responses to Terrorism and Catastrophe. *Harold G. Koenig. ISBN 1-932-031-99-5. 2005. 184 pp. $19.95. Available from the Templeton Foundation Press; www.templetonpress.org/.*

This book offers guidelines on how governments can more fully integrate religious organizations into the formal disaster response system. Specifically, it provides information on the psychological, social, and spiritual responses to trauma and addresses how the emergency response system works and the role that religious communities can play in disaster response and recovery in terms of providing emotional and spiritual care for victims.

Principles for Temporary Communities. *John K. McIlwain, Alexa Bach, Mary Beth Corrigan, Richard Haughey, Prema Katari, George J. Kelly, and Michael Pawlukiewicz. ISBN 0-87420-957-0. 2006. 30 pp. $10.00. Available free online from the Urban Land Institute, 1025 Thomas Jefferson Street NW, Suite 500 West, Washington, DC*

20007; (202) 624-7000; e-mail: customerservice@uli.org; www.uli.org/.

The purpose of this booklet is to apply community-building expertise and experience to the planning and management of temporary communities for disaster victims. It argues that a temporary community should meet the full range of its residents' needs—not only for shelter, but for safety, social services, employment, education, recreation, and a sense of place, ownership, and community. Features include how to plan in advance for temporary shelter, minimize disruption to surrounding neighborhoods, make temporary communities safer and more attractive, provide transportation options, offer housing that meets a variety of needs, create a sense of community responsibility, and devise a strategy for closing the community.

Reducing the Risk of Disasters—Helping Achieve Sustainable Poverty Reduction in a Vulnerable World*. 2006. 36 pp. Available free online from the Department for International Development (DFID), 1 Palace Street, London SW1E 5HE, UK; +44 1355 84 3132; e-mail: enquiry@dfid.gov.uk; www.dfid.gov.uk/pubs/files/disaster-risk-reduction-policy.pdf.*

This policy paper summarizes DFID's policy on disaster risk reduction as it applies to natural and technological disasters, setting out the key elements of disaster risk reduction and why it is important. It aims to provide guidance to DFID staff and also inform other UK government departments and development partners.

Management of Dead Bodies after Disasters: A Field Manual for First Responders*. Oliver Morgan, Morris Tidball-Binz, and Dana Van Alphen, editors. ISBN 92-75-12630-5. 2006. 58 pp. Free. Available from the Pan American Health Organization (PAHO), Area on Emergency Preparedness and Disaster Relief, 525 23rd Street NW, Washington, DC 20037; e-mail: disaster-publications@paho.org; www.paho.org/English/DD/PED/DeadBodiesFieldManual.htm.*

This peer-reviewed field manual for first responders offers recommendations for nonspecialists to manage the recovery, basic identification, storage, and disposal of dead bodies following disasters. It also makes suggestions about providing support to family members and communicating with the public and the media. The principles outlined in the manual are being implemented and promoted by a variety of organizations, including PAHO, the World Health Organization, the International Committee of the Red Cross, and the International Federation of Red Cross and Red Crescent Societies.

The 2006 Risk Management Yearbook*. 2006. 232 pp. $29.00. Available from the Public Entity Risk Institute (PERI), 11350 Random Hills Road, Suite 210, Fairfax, VA 22030; (703) 352-1846; www.riskinstitute.org/.*

This yearbook addresses risk management issues for the leaders of nonprofit community-serving organizations, small businesses, and small public entities. It does so by examining key trends of the past year that are likely to affect risk management in the future and identifying reliable sources of current risk management information and education. The 2006 edition takes a lessons-learned approach, examining emerging trends and recent events, such as Hurricane Katrina, to improve the ability of communities to plan and respond to the uncertainties they face in their own regions.

Protecting Emergency Responders Volume 4: Personal Protective Equipment Guidelines for Structural Collapse Events*. Henry H. Willis, Nicholas G. Castle, Elizabeth M. Sloss, and James T. Bartis. ISBN 0-8330-3907-5. 2006. 112 pp. $20. Available free online from RAND Distribution Services, PO Box 2138, Santa Monica, CA 90407-2138; (310) 451-7002, (877) 584-8642; e-mail: order@rand.org; www.rand.org/pubs/monographs/2006/RAND_MG425.pdf.*

This monograph is a technical source for National Institute for Occupational Safety and Health (NIOSH) incident commander guidelines for emergency response immediately following large structural collapse events. It characterizes response activities and expected hazards (physical, chemical, and biological).

Hurricanes

The Storm: What Went Wrong and Why During Hurricane Katrina—the Inside Story from One Louisiana Scientist*. Ivor Van Heerden and Mike Bryan. ISBN 0-670-03781-8. 2006. 320 pp. $25.95. Available from the Penguin Group; http://us.penguingroup.com/.*

This book is an inside story of the Katrina tragedy from one of the scientists who foresaw the disaster and had been sounding the alarm for years. Focusing on the storm and the related failures, it describes how the disaster came to be and discusses what can be done going forward, including laying out the necessary course of action for building the levees and the protective wetlands to guarantee category 5 flood protection for New Orleans and surrounding communities.

The Great Deluge: Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast*. Douglas Brinkley. ISBN 0-06-112423-0. 2006. 736 pp. $29.95. Published by William Morrow/HarperCollins Publishers; www.harpercollins.com/. Available from local and online booksellers.*

In this examination of the triple tragedy wrought by Hurricane Katrina (the hurricane itself, the flooding, and the government mismanagement), this author explores the Katrina experience from multiple points of view and investigates the failures of government at every level. Through interviews and original research, he outlines the character flaws, inexperience, and ulterior motives that he believes were responsible for the devastation of Katrina.

Drawing Louisiana's New Map: Addressing Land Loss in Coastal Louisiana*. ISBN: 0-309-10054-2. 2006. 204 pp. $39.00. A PDF version is $26.50 (may be read online for free). Available from the National Academies Press, 500 Fifth Street NW, Box 285, Washington, DC 20055; (202) 334-3313, (800) 624-6242; www.nap.edu/.*

This report by the National Research Council's Committee on Restoration and Protection of Coastal Louisiana is the product of a request by the governor of Louisiana to review the U.S. Army Corps of Engineers' Louisiana Coastal Area (LCA) study, the goal of which is to reverse the ongoing trend of coastal ecosystem degradation. While the research was conducted prior to Hurricane Katrina, the advice on an integrative approach to restoring and protecting coastal Louisiana should be useful in the reconstruction of the Gulf Coast.

Hurricane Katrina: Response and Responsibilities*. John Brown Childs, editor. ISBN 0-9712546-2-1. 2005. 182 pp. $10.00. Available from New Pacific Press, www.literaryguillotine.com/npp/npphome.html.*

In this book about the response to Hurricane Katrina, scholars, writers, and activists critically examine the hurricane and the rifts in American society that it brought to light. The authors offer critical assessments of what went wrong as well as hopeful conjecture about possibilities for the future of the Gulf Coast and the United States. All proceeds from the sale of this book will be donated to the People's Hurricane Relief Fund, Vanguard Public Foundation.

Eyes of the Storm: Hurricanes Katrina and Rita: The Photographic Story. Dallas Morning News*. ISBN 1-58979-359-5. 2006. 256 pp. $19.95. Published by Taylor Trade Publishing. Available from the* ***Dallas Morning News*** *at www.dallasnews.com/eyesofthestorm/about.htm.*

This book tells the stories of victims of Hurricanes Katrina and Rita through photographs, captions, and brief essays, chronicling desperation, determination, and resilience through the watchful lenses of Pulitzer Prize-winning photographers. All profits from sales of this book will be donated to the nonprofit organizations that contributed to the ongoing relief efforts.

Hurricane Katrina: The Storm that Changed America*. Kelly Knauer, editor. ISBN 1-933405-13-9. 2005. 144 pp. $21.95. Published by Time Inc. Available from local and online booksellers.*

Through pictures, words, and analysis, the editors of ***Time*** magazine use this book to tell the tale of Hurricane Katrina, chronicling the stories of the victims, the rescuers, the volunteers, the government response, and the beginning of the cleanup. They conclude with a discussion on the future of New Orleans and a brief glimpse into Hurricane Rita.

In the Wake of the Storm: Environment, Disaster, and Race After Katrina*. Manuel Pastor, Robert D. Bullard, James K. Boyce, Alice Fothergill, Rachel Morello-Frosch, and Beverly Wright. 2006. 60 pp. Available free online from the Russell Sage Foundation, 112 East 64th Street, New York, NY 10021; www.russellsage.org/news/060515.528528.*

In this report, the authors review the existing literature and research on the relationship between race, the environment, and large-

scale disasters. Their main points are that environmental inequities by race and income seem to be an established part of the American urban landscape, disasters reveal acute risks that are often distributed in a way that reflects established chasms of power, and this uneven distribution of risk may impose heavy and unfair costs on certain populations and also seems to lead to an underinvestment in prevention and preparedness, increasing burdens for society as a whole.

Floods

Rivers by Design: State Power and the Origins of U.S. Flood Control. *Karen M. O'Neill. ISBN 0-8223-3773-8. 2006. 304 pp. $22.95. Available from Duke University Press, Books Fulfillment Fulfillment, 905 West Main Street, Suite 18B, Durham, NC 27701; (919) 688-5134, (888) 651-0122; www.dukeupress.edu/.*

For a country with only a small proportion of its land in floodplains, the United States has one of the world's largest and costliest flood control systems. This book traces the emergence of the U.S. flood management system, which is overseen by the federal government but implemented in conjunction with state governments and local contractors and levee districts. It analyzes the social origins of the system and how it continues to reflect decisions made in the nineteenth and early twentieth centuries that favor economic development at the expense of environmental concerns.

River Basin Modelling for Flood Risk Mitigation. *Donald W. Knight and Asaad Y. Shamseldin, editors. ISBN 0-415-38344-7. 2006. 616 pp. $179.00. Available from Taylor & Francis Group, 7625 Empire Drive, Florence, KY 41042; (800) 634-7064; e-mail: orders@taylorandfrancis.com; www.taylorandfrancis.com/.*

As the frequency and volume of flooding increases, there is a new urgency amongst researchers and professionals working in flood risk management. This book features 30 edited lectures given by European experts at a European Union sponsored course at the University of Birmingham. A variety of topics are covered in the book, including climate change, rainfall and river flow forecasting systems, decision support systems, river flood hydraulics, sediment and dam-break modeling, risk and uncertainty, social issues, and developments in flood forecasting and warning systems.

Designed for Dry Feet: Flood Protection and Land Reclamation in the Netherlands. *Robert J. Hoeksema. ISBN 0-7844-0829-7. 2006. 168 pp. $54.00. Available from the American Society of Civil Engineers, Book Orders, PO Box 79404, Baltimore, MD 21279-0404; (703) 295-2723, (800) 548-2723; e-mail: marketing@asce.org; www.asce.org/.*

Few countries exist where humans have exerted a greater influence in shaping the landscape than the Netherlands. Located in the lowland delta of three major rivers, this small European country has fought for more than a thousand years to protect its inhabitants from floods and to reclaim flooded land. This book explores the country's unique challenges in water control and management.

Earthquakes

CD-ROM Proceedings of the 100th Anniversary Earthquake Conference, April 18-22, 2006, San Francisco, California. *2006. $75.00. Available from the Earthquake Engineering Research Institute, 499 14th Street, Suite 320, Oakland, CA 94612; (510) 451-0905; e-mail: eeri@eeri.org; www.eeri.org/cds_publications/catalog/.*

This electronic resource contains papers and abstracts of presentations given at the conference commemorating the 1906 San Francisco earthquake. Contents include approximately 1,000 papers on ground motion characteristics, hazard analysis, geotechnical engineering, building structures, bridge structures, lifeline systems, nonstructural components and contents, advanced technologies, new design criteria and methods, earthquake engineering practice, loss estimation, loss modeling and risk analysis, lessons from recent earthquakes, tsunamis, other seismic hazards, experimental methods, information technologies in earthquake engineering, impacts of earthquakes on business, response and recovery, social issues, public policy, and seismic awareness and education.

"The 1906 San Francisco Earthquake: An Earthquake Engineering Retrospective 100 Years Later." ***Earthquake Spectra***. *William T. Holmes and Robert Reitherman, editors. ISBN 1-932884-15-7. Special Issue II, Vol. 22. April 2006. 340 pp. $35.00. Available from the Earthquake Engineering Research Institute, 499 14th Street, Suite 320, Oakland, CA 94612; (510) 451-0905; e-mail: eeri@eeri.org; www.eeri.org/cds_publications/catalog/.*

Released on the 100th anniversary of the 1906 San Francisco Earthquake, this special issue is a compilation of 13 articles by top earthquake experts. Topics include the effects of the earthquake on water systems and current hazard mitigation efforts, comparisons of emergency management in 1906 to that which exists today, long-term effects of 1906 on earthquake research and education, the continuing influence of the event on public policy, a scenario of the ground shaking to be expected from a repeat of the 1906 earthquake, and a loss estimation study of the effects on the current building inventory of the region if the earthquake were repeated today.

A Crack in the Edge of the World: America and the Great California Earthquake of 1906. *Simon Winchester. ISBN 0-06-057199-3. 2005. 480 pp. $27.95. Published by HarperCollins Publishers; www.harpercollins.com/. Available from local and online booksellers.*

The 1906 San Francisco Earthquake ranks as one of the worst natural disasters in the history of the United States. This book recounts the disaster as well as what has been learned in the last century about the geological underpinnings that caused the earthquake. Additionally, it discusses the effect the event had on the rest of twentieth-century California and American history.

After the Earth Quakes: Elastic Rebound on an Urban Planet. *Susan Elizabeth Hough and Roger G. Bilham. ISBN 0-19-517913-7. 2006. 336 pp. $39.95. Available from Oxford University Press, 2001 Evans Road, Cary, NC 27513; (919) 677-0977, (800) 451-7556; e-mail: custserv.us@oup.com; www.oup.com/.*

Elastic rebound is one of the most basic tenets of modern earthquake science, the term that scientists use to describe the buildup and release of energy along faults. It is also the best metaphor for societal responses to major earthquakes in recent historic times. This book focuses on this theme, using a number of historic earthquakes as illustration. It concludes with a consideration of projected future losses on an increasingly urbanized planet, including the near-certainty that an earthquake will someday claim over a million lives.

Tsunamis

Development of Design Guidelines for Structures that Serve as Tsunami Vertical Evacuation Sites. *Harry Yeh, Ian Robertson, and Jane Preuss. Open File Report 2005-4. 2005. 42 pp. Available free online from the Washington Department of Natural Resources, Division of Geology and Earth Resources, PO Box 47007, Olympia, WA 98504-7007; (360) 902-1450; e-mail: geology@wadnr.gov; www.dnr.wa.gov/geology/.*

A 2002 meeting of experts in structural, marine, and civil engineering; seismology; geology; and emergency management was convened to assess the feasibility of coastal land use guidance in areas of strong ground shaking and tsunami hazard and to formulate a plan for its development. This report represents the first phase of the program recommended by the meeting attendees. It is a report of an exploratory study for the development of standards and guidelines for building safely against combined seismic-tsunami loads. It was performed under contracts to the Washington State Military Department Emergency Management Division on behalf of the National Tsunami Hazard Mitigation Program.

Caribbean Tsunami Hazard. *Aurelio Mercado-Irizarry and Philip Liu, editors. ISBN 981-256-535-3. 2006. 364 pp. $98.00. Available from World Scientific Publishing, 27 Warren Street, Suite 401-402, Hackensack, NJ 07601; (800) 227-7562; e-mail: sales@wspc.com; www.worldscientific.com/.*

As the proceedings of a 2004 National Science Foundation Caribbean tsunami workshop, this book aims to present the overall existing tsunami hazard in the Caribbean Sea region, a region which is typically only associated with hurricanes. It features an overview of the existing tsunami-causing factors in the region: earthquakes, subaerial and submarine landslides, and submarine explosions followed by field evidence of recent and prehistoric tsunami events. It also describes the tsunami hazard mitigation efforts being carried out locally and in collaboration with national and international programs and presents recent research findings.

Climate Change

Climate Change Begins at Home: Life on the Two-Way Street of Global Warming. *Dave Reay. ISBN 1-4039-4578-0. 2005. 256 pp. $24.95. Available from Palgrave Macmillan, 175 Fifth Avenue, New York, NY 10010; (888) 330-8477; e-mail: customerservice@vhpsva .com; www.macmillanscience.com/.*

Recognizing that climate change is one of the greatest threats that humankind faces this century, this author argues that while government and industry dither, we could cut our personal greenhouse gas emissions by 60 percent—the level necessary to halt the current trend according to the Intergovernmental Panel on Climate Change. After summarizing the current state of affairs, scientifically and politically, the book explores the climate impact of housing, gardening, food, money, work, transport, and even death and includes case studies, calculations, and lifestyle comparisons.

The Weather Makers: How Man Is Changing the Climate and What It Means for Life on Earth. *Tim Flannery. ISBN 0-87113-935-9. 2005. 384 pp. $24.00. Published by the Atlantic Monthly Press; www .groveatlantic.com/. Available from local and online booksellers.*

This book explores how climate change has shaped earth's evolution and how it will continue to do so if left unchecked. To help prevent a cataclysmic future, it suggests actions for both lawmakers and individuals, from investing in renewable power sources like wind, solar, and geothermal energy, to offering an action plan with steps each and every one of us can take to reduce carbon dioxide emissions.

Climate Change and Managed Ecosystems. *J.S. Bhatti, R. Lal, M.J. Apps, and M.A. Price, editors. ISBN 0-8493-3097-1. 2006. 464 pp. $159.95. Available from CRC Press, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487; (561) 994-0555, (800) 272-7737; e-mail: orders@crcpress.com; www.crcpress.com/.*

Featuring contributions from experts in the field of climate change, this book examines the effects of global climate change on intensively constructed or reconstructed ecosystems, focusing on land use changes in relation to forestry, agriculture, and wetlands. It examines how and why the climate has changed and what can be expected to occur in the foreseeable future and identifies potential adaptation responses to reduce the impacts of a changing climate.

Wildfire

A Test of Adversity and Strength: Wildland Fire in the National Park System. *Hal K. Rothman. 2005. 263 pp. Available free online from the National Park Service at www.nps.gov/fire/fire/fir_wil_his tory.html.*

The history of fire management in the U.S. national park system divides into two clear and distinct phases. The structure of this publication mirrors and discusses these phases: the 1872-1967 era of suppression and the subsequent reintroduction of fire, both natural and introduced, as a management tool.

GAO

The Government Accountability Office (GAO) reports provide information and insight into key issues and concerns of the U.S. Congress. It often publishes studies regarding hazards and disaster policy. Some recent GAO reports and testimonies that might interest ***Observer*** readers are listed below. Summaries and full text are available on the Web at *www.gao.gov/*. Printed copies are also available. The first copy is free. Additional copies are $2.00 each. To order, contact the *GAO, 441 G Street NW, Room LM, Washington, DC 20548; (202) 512-6000; TDD: (202) 512-2537; www.gao.gov/cgi-bin/ordtab.pl.*

Federal Emergency Management Agency: Factors for Future Success and Issues to Consider for Organizational Placement. *2006. GAO-06-746T. 22 pp.*

U.S. Tsunami Preparedness: Federal and State Partners Collaborate to Help Communities Reduce Potential Impacts, but Significant Challenges Remain. *2006. GAO-06-519. 65 pp.*

Wildland Fire Management: Update on Federal Agency Efforts to Develop a Cohesive Strategy to Address Wildland Fire Threats. *2006. GAO-06-671R. 19 pp.*

Continuity of Operations: Agencies Could Improve Planning for Telework during Disruptions. *2006. GAO-06-740T. 14 pp.*

Disaster Preparedness: Preliminary Observations on the Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters. *2006. GAO-06-790T. 17 pp.*

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Center phone number ..... (303) 492-6818
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