NATURAL HAZARDS Observer

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Grassroots Homeland Security

—an invited comment

To local governments, non-profits, and businesses, homeland security means not only reducing the threat of terrorism, but also working to become safe and secure despite any number of hazards and threats—natural or otherwise.

At the grassroots level, homeland security means identifying potential problems and developing public-private partnerships to prevent or minimize death, destruction, and disruption. It means approaching multiple hazards with multi-disciplinary teams in a multi-cultural environment. As always, it means solving problems and seizing opportunities to make communities better while making them safer.

Locals are not interested in the turf battles of preparedness versus mitigation, the characteristics of natural hazards versus terrorism, or whether a hazard is specific to one locality and not another. Although these issues are important, they are seldom discussed in the living and meeting rooms of communities. Yet, all communities need to be prepared for the unthinkable.

Experience has taught us that many of the things we do for one hazard help us defend against others. The good news is that preparedness and mitigation continue to be wise actions that help mobilize our disaster defense.

Good Things are Happening . . .

Around the country, grassroots homeland security is focusing on positive results by local teams and volunteers. Here are a few examples of programs and activities.

- Since September 11, 2001, more than 60,000 people have signed up as Citizen Corps volunteers, working on preparedness issues in more than 360 Citizen Corps councils in 43 states.
- Across the country, an estimated 300,000 tornado SafeRooms have been built since the Federal Emergency Management Agency (FEMA) popularized the concept in 1998. SafeRooms are rooms that are anchored and armored, above or below ground, to provide shelter during the strongest storms.
- In Los Angeles, California, more than 44,000 volunteers have been trained as members of Community Emergency Response Teams, including light search and rescue, emergency first aid, and basic fire suppression.
- Oakland's Project SAFE in California has completed both structural and nonstructural mitigation projects in more than 650 homes. This activity is part of a $1 million FEMA grant that was matched with local contributions and donations.
- Seattle, Washington, volunteers spend Saturdays identifying and removing earthquake hazards and helping to retrofit schools. More than 2,500 homeowners have attended home retrofit classes, and 360 contractors and builders have been trained in earthquake-resistant construction methods (see the ***Observer***, Vol. XXV, No. 5, p. 1).
- The Miami-Dade Community Action Agency in Florida installed hurricane shutters on more than 650 homes last year, using local and FEMA funds and working in cooperation with the Miami-Dade Office of Emergency Management. Also underway are efforts to install shutters on university dorms and hurricane glass on Miami's homeless assistance center.
- Roanoke, Virginia, is bringing together planners, engineers, developers, environmentalists, and others to institute low-impact, environmentally friendly growth innovations, such as greenways, natural remediation, and on-site stormwater management.
- In Bolivar, Missouri, 240 volunteers representing 47 local groups—from churches to charities—cleared out drainageways last summer.
- In Monroe, Louisiana, nearly 500 volunteers from similar groups held a mitigation blitz last spring to help 90 needy families repair homes and curb hazards ranging from extreme heat to West Nile virus.
- Disaster-Ready Austin, a public-private coalition in Texas, is placing emergency radios in public buildings, schools, libraries, and senior citizen centers.
- Freeport, New York, a Long Island community that lost five firefighters in the September 11 attacks, is home to more than 100 volunteers who are educating residents and businesses about ways to reduce risks from hazards ranging from fires to flooding to human-caused threats.

. . . But They Are Not Enough

It is no accident that many of these profiles are from communities that have actively participated in FEMA programs to help communities create public-private partnerships to improve local disaster resistance. The seeds sown by FEMA continue to sprout at the local level. Energetic public-private partnerships and a rise in community-based activism have created a body of effective, locally based mitigation programs that are widely shared through success stories, e-mail networks, mentoring, web sites, and other networking opportunities, as well as grants and other incentives.

Although these kinds of good works are springing up around the country, more are needed. Far too often, individuals interested in an all-hazards approach are constrained by a lack of time, funding, technical and other kinds of expertise, and political support.

We can and should do better. Changing emphases in disaster management and natural hazards mean that now, more than ever, local communities must be creative and implement programs tailored to meet their specific circumstances.

The Tulsa Experience

Here in Tulsa, Oklahoma, as another example, homebuilders have constructed hundreds of Tornado SafeRooms. In addition, we have relocated more than 1,000 families from floodplains to safer areas. Since September 11, 2001, we have also assessed and are systematically addressing natural and human-caused hazard vulnerabilities in key public buildings and making use of volunteers for preparedness and mitigation programs. In partnership with the federal government and many other outside institutions, we have created broad-based partnerships that span a variety of professions and interests. Such public-private partnerships are essential to success.

Opportunities

Bringing private citizens together with local governments, nonprofit organizations, and businesses to collaborate on disaster preparedness strengthens relationships and improves response capabilities, regardless of the type of

incident. Fostering a national network or association for disaster-resistant communities to exchange information would be a cost-effective way to provide resources and ideas to local communities. Further, a broadly defined federal homeland security block grant program should be established to provide stable funding that is flexible enough to meet varying local needs. Private foundations should also direct more dollars toward hazard issues at local levels.

A secure homeland is prepared, disaster-resistant, disaster-resilient, and sustainable. It has as its foundation strong communities with adequate resources, experience, and technology, along with a dynamic and responsive federal network of support.

At the local level, we are learning that it is possible to achieve a holistic perspective on emergency management that embraces collaborative coalitions and public-private partnerships and acknowledges the unique strengths and abilities of a wide array of partners. With time, effort, resources, diligence, good will, and relationship building, these coalitions can be structured and managed so that everybody wins.

From the grassroots perspective, therefore, the best defense against disaster is a strong, close-knit community of neighbors who celebrate diversity and take good care of each other. That is *real* homeland security.

Ann Patton, Director
Tulsa Project Impact, Citizen Corps,
and Tulsa Partners, Inc.

References

- *http://www.TulsaPartners.org*.
- *http://www.fema.gov*. "Citizen Corps Celebrates Successes at One-Year Anniversary." January 30, 2003.
- *http://www.seas.gwu.edu/~emse232*—website newsletters for the George Washington University Institute for Crisis, Disaster, and Risk Management.
- *http://www.seattle.gov/projectimpact*—interviews with Henry Amparan, Los Angeles Fire Department; Tom Cain, Roanoke Impact; Kermit Hargis, Polk County, Missouri, Emergency Management; Dr. Ernst Kiesling, Texas Tech University; Joe Madigan, Village of Freeport, New York; Tom Malmay, Ouachita County, Louisiana, Civil Defense Agency; Frank Reddish, Miami-Dade Emergency Management; and Valli Wasp, Austin Emergency Management.

Our Latest Working Paper

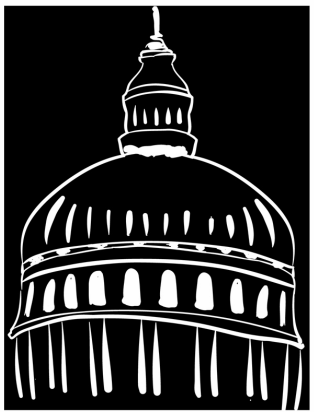
Major Terrorism Events and the U.S.

Since September 11, 2001, the U.S. has undergone fundamental and wide-reaching changes in its approach to catastrophic events. Homeland security supercedes past approaches to disaster, and the nation is in the midst of a sweeping metamorphosis to meet changing risks that now include terrorism and weapons of mass destruction. Our latest working paper, ***Major Terrorism Events and Their U.S. Outcomes (1988-2001)*** (WP 107, 2003, 59 pp.) by Claire B. Rubin, William R. Cumming, Irmak Renda-Tanali, and Thomas A. Birkland, provides a preliminary analysis of major terrorist events from the years 1988-2001. The authors systematically identify and analyze defining terrorist events, describe their significance, and explore the causal relationships between the events and their results.

The project team used the Terrorist Time Line (TTL), written by Claire B. Rubin (available at *http://www.disaster-timeline.com*), as a visual outline, along with an overview of general emergency management infrastructure—including laws, regulations, practices, expert systems, and organizational changes. This systematic examination, although limited in scope and duration, provides a foundation for policy and regulatory analyses of these major events.

The work was funded by the National Science Foundation (NSF) and is limited to recent terrorist events. It identifies the need for similar, more in-depth efforts and calls for research to compare and contrast the authorities, programs, plans, and systems in place for the three major categories of disasters in the U.S.—natural, industrial/technological, and human-induced. WP 107 also mentions the need to more closely analyze the mutuality of relationships in the homeland security and emergency management arenas, since there is currently great interest in the transfer of knowledge gained from natural, industrial, and technological disasters to national defense and homeland security.

The on-line report is available at *http://www.colorado.edu/hazards/wp/wp107/wp107.html*. Printed copies may be purchased for $9.00 from the *Publications Administrator, Natural Hazards Research and Applications Information Center, 482 UCB, University of Colorado, Boulder, CO 80309-0482; (303) 492-6819; e-mail: janet.kroeckel@colorado.edu; http://www.colorado.edu/hazards*.



Washington Update

President Creates National Incident Management System

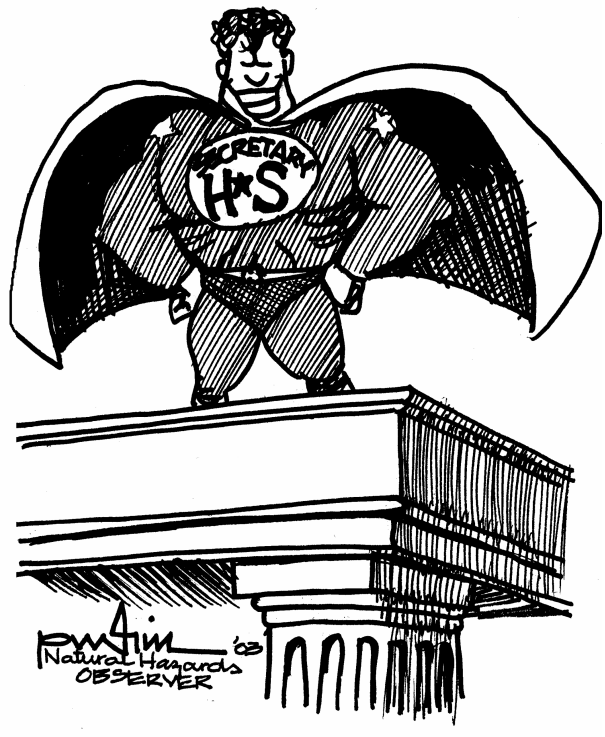
In order to enhance the ability of the U.S. to manage major domestic incidents, such as natural disasters or acts of terrorism, President Bush recently issued the "Homeland Security Presidential Directive/HSPD-5" to establish a single, comprehensive national incident management system. Under this directive, the U.S. government will ensure that all levels of government across the nation have the capability to work effectively together using a national approach to domestic incident management. In these incidents, the federal government is to treat crisis management and consequence management as a single, integrated function, rather than separate tasks.

Implementation

The Secretary of Homeland Security will oversee domestic incident management when any of the following four conditions applies:

- a federal department or agency has requested the assistance of the secretary;
- the resources of state and local authorities are overwhelmed and federal assistance has been requested by the appropriate state and local authorities;
- more than one federal department or agency has become substantially involved in responding to the incident; or
- the secretary has been directed to assume responsibility for managing the incident by the president.

As before, the initial responsibility for managing domestic incidents falls on state and local authorities. The federal government will provide assistance when state and local resources are overwhelmed or when federal interests are involved. The secretary will ensure adequate planning, equipment, and training exercises for states and provide assistance to develop all-hazards plans and capabilities. These activities will also be undertaken with the private and nongovernmental sectors.



Under HSPD-5, the Attorney General has lead responsibility for criminal investigations of terrorist acts or threats inside the U.S., or directed at the U.S. abroad. The Attorney General and the secretary of Homeland Security will coordinate activities between their two departments in this regard.

The secretary for Homeland Security shall also ensure that information related to domestic incidents is gathered and provided to the pubic, the private sector, state and local authorities, federal departments and agencies, and the president. In addition, the secretary shall provide regular reports on the readiness and preparedness of the nation at all levels of government to prevent, prepare for, respond to, and recover from domestic incidents.

NIMS

The secretary is to develop and submit for review to the Homeland Security Council (HSC) (see the ***Observer***, Vol. XXVI, No. 3, p. 7) the National Incident Management System (NIMS). To provide for interoperability and compatibility among federal, state, and local capabilities, NIMS will include a core set of concepts, principles, terminology, and technologies covering the incident command system, multi-agency coordination systems, unified command, training, identification and management of resources, qualifications and certification, and reporting of incident information. A national system of standards, guidelines, and protocols to implement NIMS must be ready by June 1, 2003.

National Response Plan

In addition, the secretary shall develop and submit to the HSC an updated National Response Plan (NRP) that integrates federal government domestic prevention, preparedness, response, and recovery plans into one all-hazards plan. The plan will include protocols for operating under different threats or threat levels and will include a consistent approach to reporting incidents, providing assessments, and making recommendations to the president and others. By September 1, 2003, the secretary must present to the president recommendations for fully implementing the NRP.

Adoption of Requirements

By August 1, 2003, the head of each federal department and agency shall submit a plan to adopt and implement NIMS, and beginning in fiscal year 2005, federal departments and agencies shall make adoption of the NIMS a requirement for providing federal preparedness assistance through grants, contracts, or other activities.

The complete text of the presidential directive can be found at *any federal repository library* or on the *White House web site: http://www.whitehouse.gov/news/releases/2003/02/print/20030228-9.html*.

DOL Issues Final Rule on Disaster Unemployment Assistance

In order reduce confusion regarding eligibility for disaster unemployment assistance in the wake of major disasters declared as a result of the terrorist attacks of September 11, the Department of Labor (DOL) re-examined its Disaster Unemployment Assistance (DUA) program. A final rule was adopted regarding this evaluation, and it became effective on April 7, 2003.

Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, any individual who is unemployed as a result of a presidentially declared disaster may receive "such benefit assistance . . . while such individual is unemployed" and for which the individual is not entitled to any other unemployment compensation. The recipient can receive benefits up to 26 weeks after a major disaster is declared; however, victims of September 11 were given extended assistance of up to 39 weeks under Public Law 107-154.

Under the new rule, the DOL, which administers the DUA, determined that the phrase in the Stafford Act, "unemployment is a direct result of the major disaster," means that an individual's lack of employment must be an immediate result of a disaster and not the result of a longer chain of events precipitated or exacerbated by a major disaster, such as layoffs by companies due to a decline in business in a disaster aftermath. Specifically, in order to receive assistance, individuals must be unemployed as a result of physical damage or destruction of a work site, physical inaccessibility of a work site, or lack of work or loss of revenues because a major supplier or source of revenue was disrupted by a disaster.

The complete text of the final rule can be found in the ***Federal Register***, Vol. 68, No. 44 (March 6, 2003) on pages 10932 to 10937. The ***Federal Register*** is located in *any federal repository library* and on-line at *http://www.access.gpo.gov*. For further information about

the program and this final rule, contact *Betty Castillo, Division of Unemployment Insurance Operations, Office of Workforce Security, Employment and Training Administration, U.S. Department of Labor, 200 Constitution Avenue, N.W., Room S-4231, Washington, DC 20210; (202) 693-3209; fax: (202) 693-3229; e-mail: bcastillo@doleta.gov.*

Flood Map Modernization Funded by Congress

In order to reduce the loss of human life and property damage resulting from flooding, it is important to understand where flooding is most likely to occur. For decades, the Federal Emergency Management Agency (FEMA), under its National Flood Insurance Program (NFIP), has mapped these areas in cooperation with local and state governments. However, many maps have not been updated in years, even though development has continued to occur in and around floodplains.

Congress recently passed Public Law 108-7, the omnibus appropriations bill for federal fiscal year 2003, and provided $150 million for map modernization to improve the nation's flood maps.

Program goals include:

- developing up-to-date flood hazard data for all flood-prone areas nationwide to support sound floodplain management and prudent flood insurance decisions;
- providing the maps and data in digital format to improve the efficiency and precision with which mapping program customers can use this information;

- fully integrating FEMA's community and state partners into the mapping process to build on local knowledge and efforts;
- improving processes to make it faster to create and update the maps; and
- improving customer services to speed processing of flood map orders and raise public awareness of flood hazards.

The complete text of the legislation can be found at *any federal repository library* or on the *Library of Congress web site: http://Thomas.loc.gov*. Detailed information about flood hazard mapping can be obtained from the *Federal Emergency Management Agency, 500 C Street, N.W., Washington, DC 20472; (202) 566-1600; http://www.fema.gov.*

FEMA Announces HAZUS Vendor Program

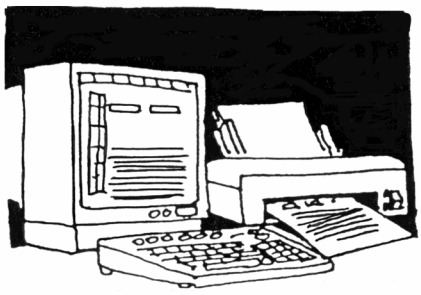
The release of HAZUS-MH in 2003 will be a major milestone in the ongoing development of HAZUS, FEMA's multi-hazard risk assessment tool. The anticipated growth in the number of HAZUS users, coupled with the technical sophistication of this loss estimation tool, will place unprecedented demands on FEMA to provide training and technical support services to a diverse group of users.

In response to this anticipated increase in HAZUS users as well as the need to provide training and technical support to these users, FEMA recently announced the HAZUS Vendor Program (HVP). The goal of HVP is to establish a program administered through the private sector to provide training and technical assistance to the next generation of HAZUS users. The term "vendor" refers to individuals who will be trained and certified by FEMA to implement the program.

HAZUS vendors will be certified to provide instruction and technical assistance in earthquake, hurricane, or flood analysis; software implementation and technical support; and multi-hazard mitigation planning. FEMA is seeking vendors who have strong backgrounds in these areas.

HAZUS vendors will undergo an intensive training program, to be administered by FEMA. Following successful completion of the training, the vendor will be placed on a national HVP registry, indicating their qualifications and availability to provide HAZUS-MH training and technical assistance to interested sponsors, such as regional FEMA offices, state emergency management agencies, and local jurisdictions. The vendors will be compensated through this fee-based training initiative.

Individuals who are interested in participating in the HAZUS Vendor Program should contact *Tom Durham; (703) 535-3005; TSDurham@pbsj.com.*



INTERNET PAGES

Below are new or updated Internet resources that the Natural Hazards Center staff have found informative and useful. For a more complete list of some of the better sites dealing with hazards and disasters, see *http://www.colorado.edu/hazards/sites/sites.html*.

All Hazards

http://www.ciao.gov

The Critical Infrastructure Assurance Office (CIAO) was created in response to the need to coordinate federal initiatives on critical infrastructure, and this web site supports that office's efforts with a wide variety of information.

http://www.fema.gov/library/bizindex.shtm

The Federal Emergency Management Agency (FEMA) has a section on its web site devoted to business continuity planning that is designed as a step-by-step approach to emergency planning, response, and recovery for all types of companies.

http://www.aap.org/terrorism/index.html

The American Academy of Pediatrics established this web site to provide resources and a toolkit to ensure that healthcare providers have timely access to a variety of accurate and comprehensive information about children in disasters.

http://www.opm.gov/emergency/

The U.S. Office of Personnel Management (OPM) has created a variety of emergency preparedness brochures to inform government officials, media, and the general public of OPM response and operations during a crisis or emergency. A select list of resources is included as well.

http://edis.ifas.ufl.edu/BODY_WC034

The Cooperative Extension Service at the University of Florida has created a document titled "Getting the News out in Times of Disaster" that presents a variety of communication strategies using a case study of Florida wildfires.

http://www.nmfi.org

The web site for the National Mass Fatalities Institute provides information about training, support, and resources related to preparing emergency planners and responders for mass casualty incidents.

http://www.photolib.noaa.gov

Free, high quality coastal and environmental photographs are available from the National Oceanic and Atmospheric Administration (NOAA)'s on-line photo library. A variety of searches of these public domain photographs are available at this web site.

http://www.aspca.org/site/PageServer?pagename=emergency

New York City's Association for the Prevention of Cruelty to Animals (ASPCA) web site contains information on emergency pet preparedness that includes a step-by-step plan for protecting pets in disaster.

http://www.disaster-info.net/SUMA

The Pan American Health Organization's Program on Emergency Preparedness and Disaster Relief announced that the SUMA (Humanitarian Supply Management System) web site has been given a complete facelift to provide for more dynamic service.

http://www.islandvulnerability.org

With help and inspiration from many, a new island vulnerability web site has just gone on-line with the intent of exploring the unique challenges that islands and other isolated geographies face when dealing with risk and disasters. The web site examines the processes that create, maintain, and reduce the vulnerability of island communities.

http://mountains.unep.net/

This web site portal provides access to the major events and information on mountain environments and development. Mountain areas make up 24 percent of the earth's land surface and about 25 percent of the global population lives in or very near mountains. The site includes a section on hazards and conflicts.

Terrorism

http://www.nctsnet.org/nccts/nav.do?pid=hom_main

The National Child Traumatic Stress Institute, an organization that works to raise the standard of care and improve access to services for traumatized children, their families, and communities throughout the U.S., provides in-depth resources on their web site, along with a new set of publications entitled, "Talking to Children About War and Terrorism."

Avalanche

http://www.glacieravalanche.org/

This web site is a partnership between the U.S. Forest Service, National Park Service, National Weather Service, Glacier Country Avalanche Center Incorporated (GCAC, Inc.), and the people and businesses of Northwest Montana. It provides a wealth of information on avalanche safety and education.

http://www.coldregions.org

The Cold Regions Bibliography Project provides access to over 200,000 citations spanning literature on snow, permafrost, glaciers, ice, and climate change. The site includes a calendar of cold region-related events.

Wildfire

http://www.wildfireprograms.com

The USDA Forest Service Southern Research Station, in cooperation with Louisiana State University and the Southern Regional Extension Forestry office, has developed an on-line database of information about wildfire mitigation programs and policies that states and high fire-risk communities have adopted to address hazardous fuel conditions on private property. The web site currently describes programs in 21 states and more information will be added in the coming months.

Earthquakes

http://www.meseisforum.net

The Middle East Seismological Forum (MESF) serves as an information conduit for scientific activities related to research, data acquisition, and publications on seismicity in the Middle East.

http://pubs.usgs.gov/fs/fs-131-02/fs-131-02.html

Scientists from the U.S. Geological Survey (USGS) and the Center for Earthquake Research and Information (CERI) in Memphis, Tennessee, have updated their forecasts for earthquake activity in the New Madrid Seismic Zone. A fact sheet containing this new information is available at this web site.

Floods and Drought

http://www.ecologic.de/floods2003
http://www.ecologic.de/floods2003/downloads/floodsreport.pdf

On February 5 and 6, 2003, water directors and experts of the European Union and newly admitted states participated in a workshop in Bonn to promote European cooperation on flood protection. The papers of this workshop, ***Precautionary Flood Protection–An International Exchange of Experiences***, are now available on-line.

http://www.southasianfloods.org/

This web site is co-sponsored by the International Center for Integrated Mountain Development and the World Meteorological Organization and is designed to share and disseminate flood information throughout the Hindu Kush-Himalayan region where rivers sustain the livelihoods of over a billion people.

On The Line

Empowering Communities In the Wildland/Urban Interface

Once thought of as a problem primarily in the western U.S., wildland fires that border developed lands are now a reality not only in the west, but in the south, the Great Lake states, and other parts of the country as well. As the nation's population grows, development pressure has extended the built environment into areas that have historically remained wild. This trend has created an extremely complex mixed-use landscape, which in some areas has come to be known as the wildland/urban interface. As home construction encroaches on forest lands, grasslands, farms, and other fire-prone areas, both lives and property are put at risk from wildland fire.

Losses of life and property and the costs of suppressing wildland fires have increased at an astounding rate. Since 1970, more than 10,000 homes and 20,000 other structures and facilities have been lost to wildland fires. Annual appropriations for the National Fire Plan, the policy foundation for federal and interagency fire management activities have surpassed $2 billion (see the ***Observer***, Vol. XXVII, No. 3, p. 17). These costs and dangers have risen dramatically due in part to the buildup of hazardous fuels, increased home construction, severe drought, and a lack of community-based wildfire mitigation planning policies.

Wildland/Urban Interface

For planning, mitigation, and educational purposes, it may be useful to consider the wildland/urban interface not as a location, but as a set of conditions. Though the interface is typically defined as a geographic area, it is also appropriate to think of it as a set of underlying conditions that exist–or could exist–in nearly every community in the country. Wildland/urban interface factors include weather patterns, vegetation types, building and road construction, average lot size, topography, hydrology, and other variables that combine to make some communities more vulnerable to wildfire than others. Trying to pinpoint the wildland/urban interface is therefore difficult. U.S. Census data indicate that nine of the 15 fastest growing areas in the country are already considered wildland fire-prone areas or are moving toward this designation as a result of rapid growth and accompanying urban sprawl.

Wildland fires are not going to disappear. Living successfully with them will require long-term vision and commitment among a wide group of policy makers and stakeholders to address the root causes of fire hazards. Such a shared vision must look beyond traditional fire response and suppression mechanisms to address community vulnerability, mitigation, and ecologically sound land management.

Firewise Community Programs

Under the aegis of the National Wildland/Urban Interface Fire Program, federal and state agencies, safety organizations, and first responder groups are working together on a public service initiative called the Firewise Communities Program. Firewise is managed by the Wildland/Urban Interface Working Team, a consortium of agencies and organizations that includes the U.S. Department of Agriculture/Forest Service, U.S. Department of the Interior, Federal Emergency Management Agency, International Association of Fire Chiefs, National Emergency Management Association, National Association of State Fire Marshals, National Association of State Foresters, National Fire Protection Association, and U.S. Fire Administration.

Firewise was designed to educate homeowners, community leaders, planners, developers, and others about the hazards associated with fire in the wildland/urban interface. Firewise educational programs and workshops empower participants to take an active role to protect their homes and businesses and create communities that are well-versed in wildfire mitigation activities.

Firewise programs address many aspects of mitigation and community planning, including creative landscaping, home construction and design, fire-resistant structures, and fire hazard recognition. Firewise workshops prepare community leaders and fire service professionals to recognize the wildland/urban interface, deliver fire education to residents, and incorporate Firewise planning into local planning activities through collaborative decision-making.

Examples of techniques that property owners can employ include creating a defensible space around residential structures by clearing trees and brush, adopting targeted

landscaping practices, selecting ignition-resistant building materials, positioning structures away from slopes, and working with fire protection agencies to develop emergency access to properties.

Firewise workshops have been given nationally since 1999. Workshops feature interactive discussions, mapping exercises, and wildfire simulations. There have been over 3,000 workshop participants, including community representatives, municipal planners, business leaders, homeowner association members, and fire service professionals. Many participants continue to work with their communities to implement wildfire mitigation programs. The national workshop series has also generated dozens of local and state workshops reaching many more with the Firewise message.

Firewise Communities/USA Recognition Program

In the spring of 2003, Firewise is launching a nationwide program to recognize individual communities for taking action to protect people and property from the dangers of fire in the wildland/urban interface and for maintaining an appropriate level of fire readiness. Called "Firewise Communities/USA," this program was created for small communities and neighborhood associations interested in mitigating wildland fire hazards through adoption and implementation of programs designed with assistance from state forestry agencies and state and local fire staff.

To earn Firewise Communities/USA status, communities must meet the following criteria:

- enlist a wildland/urban interface specialist to complete a community assessment and create a plan that identifies agreed-upon solutions to be implemented by the community;
- sponsor a local Firewise task force committee, commission, or department to maintain the Firewise Community/USA program;
- observe a Firewise Community/USA day each spring that is dedicated to a specific Firewise project;
- invest a minimum of $2.00 per capita annually in local Firewise projects; and
- submit an annual report that documents continuing compliance with the program.

The twelve communities that participated in the pilot phase of the program have already been recognized by Firewise. Communities who are interested in learning more about this program or applying for Firewise Communities/USA recognition can visit *http://www.firewise.org/usa.*

Technical Support and Information Resources

Firewise program staff provide direct assistance and advice to communities engaged in planning and mitigation of wildland/urban interface fire hazards. In cooperation with state and federal partners, staff help to identify local needs and integrate Firewise planning concepts and philosophy into local multi-hazard mitigation plans, as well as connecting communities with appropriate tools, techniques, and technologies to further Firewise activities. Select communities around the U.S. have been awarded mapping software packages to help assemble and interpret data to improve their local fire and mitigation plans.

In addition to the wealth of material on the Firewise Communities web site, the program is continuously developing informational materials to help communities understand and address wildland fire issues. Firewise information products include a stakeholder newsletter, landscaping and home construction checklists, mini-documentaries, CD-ROMs, school education projects, and more.

Why Firewise?

The Firewise Communities vision is that wildland fires can occur in the future without the loss of homes and structures. The program's goal is to foster the creation of homes and communities built, designed, and maintained to withstand wildland fire without the intervention of the fire department. By working together on this shared national problem, community leaders can create local solutions.

Jim Smalley
Firewise Program and
National Fire Protection Association
Quincy, Massachusetts

A list of workshop locations and dates for 2003 is available at *http://www.firewise.org*.

Contracts and Grants

Below are descriptions of recently awarded contracts and grants for the study of hazards and disasters. An inventory of contracts and grants awarded from 1995 to the present (primarily those funded by the National Science Foundation) is available from the Natural Hazards Center's web site: *http://www.colorado.edu/hazards/grants.html*.

Toward Improved Understanding of Warnings for Short-Fuse Weather Events. Funding: National Science Foundation, $422,951, 36 months. Principal Investigators: *Eve Gruntfest and Charles Benight, Department of Geography, CoH 2021, University of Colorado–Colorado Springs, Colorado Springs, CO 80933; e-mail: ecg@uccs.edu*.

Modern infrastructures have a high degree of interdependency that makes them more vulnerable to human-caused disasters such as acts of terrorism. In assessing the vulnerability of a particular structure or system, it is important to analyze its influence on other infrastructures. The goal of this project is to develop a model capable of describing the risks inherent in our nation's critical infrastructures. It will establish the theoretical bases underlying the concept of risk interoperability in a system of interconnected structures, develop a risk model to address geographical and functional decomposition of a system of infrastructures, study the dynamics of disturbance, and provide a risk model to the electric power infrastructure.

Input-Output Risk Model of Critical Infrastructure Systems. Funding: National Science Foundation, $467,750, 36 months. Principal Investigators: *Yacov Y. Haimes, Wei Li, James H. Lambert, and Barry M. Horowitz, Olson Hall, Room 112a, Engineering Systems/Information Engineering Department, University of Virginia, Charlottesville, VA 22904; e-mail: yyh4f@virginia.edu*.

The meteorological and hydrological sciences have shown dramatic improvements in warning lead times, long-term model accuracy, and integrated real-time monitoring for short fuse weather events. Nevertheless, the social science research necessary to translate this new knowledge into improved responses to events is missing. A team of geographers and psychologists will work with forecasters and emergency managers in two case studies of Austin, Texas, and Denver, Colorado. Both are cities with high growth rates, substantial diversity, and significant disaster potential. Researchers will study public and private sources of warning information, examine how changing demography influences public responses to warnings, evaluate the use of new technologies for warnings, assess the construct of "false alarms," and evaluate the use of social cognitive theory in understanding how people respond to warnings.

An Integrated Study of Post-Flood Hydrology, Ecology, Politics, and Policy Change: A Cross-National, Urban Perspective. Funding: National Science Foundation, $29,970, 12 months. Principal Investigators: *Binayak P. Mohanty and Eric Lindquist, 301 C Scoates Hall, Wisenbaker Engineering Research Center, Texas A&M University, College Station, TX 77843*.

Natural disasters such as floods, earthquakes, and hurricanes have impacts far beyond their physical damage. The political impacts of disasters can be immediate, such as the need for federal disaster relief aid, or long-term, as in changes to long-standing land-use regulations. As a result of Tropical Storm Alison, Houston suffered over $5 billion in damages. Recently, the German city of Dresden and the Czech Republic city of Prague experienced similar disasters with losses in the billions of dollars. The similarity of these events provides an opportunity to understand how events such as urban flooding develop and propagate across scales and influence decision processes regarding physical infrastructure and subsequent changes in policy on an international level.

Experiences of Communities Employing a "No Adverse Impact" Approach to Floodplain Management. Funding: Public Entity Risk Institute, 12 months. Principal Investigator: *Association of State Floodplain Managers, 4233 West Beltline Highway, Madison, WI 53711; (608) 274-0123; fax: (608) 274-0696; e-mail: asfpm@execpc.com*.

Current floodplain management standards allow for floodwater to be diverted into other areas, essential

floodwater storage area to be filled, and other development activities conducted with little or no regard as to how they impact others in the floodplain and watershed. The net result is increasing damage potential in the nation's floodplains—a course that is not equitable to those whose property is impacted and that is not economically sustainable. "No Adverse Impact" floodplain management ensures that the action of one property owner does not adversely impact another. This project will examine case studies of jurisdictions that have adopted "No Adverse Impact" management criteria and have identified acceptable levels of impact, appropriate measures to mitigate those adverse impacts, and a plan for implementation.

A Design/Test Environment with Integrated Experimental and Computational Simulation of Unsteady Wind Loads for Mitigation of Wind-Related Natural Hazards. Funding: National Science Foundation, $490,956, 60 months. Principal Investigator: *Frederick L. Haan, Department of Aerospace Engineering and Engineering Mechanics, 2271 Hoew Hall, #1200, Iowa State University, Ames, IA 50011-2271; e-mail: haan@iastate.edu.*

Research and education activities in this project pursue the mitigation of wind-related natural hazards—the most costly natural hazards faced by the U.S. The primary objective is to establish a design and testing environment in which a diverse collection of participants can learn, design, and test new concepts in wind-resistant design. Computational simulation tools will be developed, and, as designs are tested, the models and other tools will be validated and improved. The project will facilitate interaction among researchers, students, and industry for constructing new concepts in wind-resistant design.

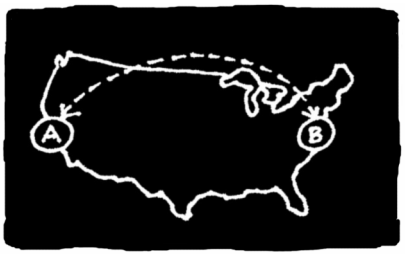
EMAP to Look at Accreditation

Across the country, state and local emergency managers and emergency management programs play a crucial and vital role in preparedness. They are often the sole entities responsible for planning and coordinating disaster mitigation and recovery. State level emergency response personnel work to create safer communities and reduce disaster-related losses to residents, businesses, and key infrastructure. However, agency titles and responsibilities vary greatly from state to state, as do their administrative structures and where they are housed. Aside from professional organizations and affiliations, there are no consistent standards or processes with which emergency management agencies can demonstrate compliance in their work.

In recognition of this and the important work occurring at the state level, a dozen national organizations joined together in 1997 to create an accreditation process for state-level emergency management programs – the Emergency Management Accreditation Program (EMAP). Organizations that collaborated on creating the EMAP standard include the National Emergency Management Association, International Association of Emergency Managers, Federal Emergency Management Agency, U.S. Department of Transportation, Association of State Floodplain Managers, Institute for Business and Home Safety, International Association of Fire Chiefs, National Association of Counties, National Association of Development Organizations, National Conference of State Legislatures, National Governors Association, National League of Cities, and the U.S. Environmental Protection Agency.

EMAP provides a voluntary accreditation process for state, territorial, and local programs that are responsible for preparing for and responding to disasters, with the goal of fostering improved and consistent emergency management program capabilities. Adopting EMAP standards will strengthen community capabilities in responding to all types of hazards, from tornadoes and earthquakes to school violence and bioterrorism. States that are applying for accreditation conduct a self-assessment that includes gathering internal documentation. An EMAP team then visits the jurisdiction to take a more in-depth look at individual protocols and practice.

EMAP has joined with the Federal Emergency Management Agency (FEMA) to conduct a baseline assessment of all state and territorial emergency management programs that will include a self assessment, on-site assessment, and feedback on the accreditation process and benefits. Training modules and information about the EMAP standard are available from *Emily DeMers, EMAP, P.O. Box 11910, Lexington, KY 40578; (859) 244-8210; e-mail: edemers@csg.org; http://www.emaponline.org.*



Conferences and Training

Below are the most recent conference announcements received by the Natural Hazards Center. A comprehensive list of hazard/disaster meetings is posted on our web site: *http://www.colorado.edu/hazards/conf.html*.

Annual VOAD Conference. Sponsor: North Dakota Chapter of the National Voluntary Organizations Active in Disaster (VOAD). Bismarck, North Dakota: May 13-16, 2003. National voluntary disaster agency program heads and state and local VOAD agency leaders from around the country will share interagency response and recovery experiences. Information about the agenda, conference schedule, and registration is available at *NDVOAD, American Red Cross, 4007 State Street, Bismarck, ND 58503; (701) 223-6700; http://www.nvoad.org/annualconf1.php.*

Annual Partnership for Public Warning Convention. Sponsor: Partnership for Public Warning (PPW). McLean, Virginia: May 15-17, 2003. "From sensors to citizens: public warning in the 21st century," is the theme of this national meeting devoted to public warning systems and issues. Conference information can be requested from *PPW, 7515 Colshire Drive, M/S N655, McLean, VA 22101; (703) 883-2745;* or found at *http://www.partnershipforpublicwarning.org.*

NFPA World Safety Conference and Exposition. Sponsor: National Fire Protection Association (NFPA). Dallas, Texas: May 18-21, 2003. This meeting is directed at fire and life safety professionals. The conference offers professional development opportunities, education tracks that focus on timely issues, and an exposition that features industry suppliers. Complete registration information is available from *Leads Etc., Incorporated, 1600 Boston Providence Highway, Building Box 79, Walpole, MA 02081; (617) 770-3000; http://www.nfpa.org/ProfessionalDev/EventsCalendar/WFCSExpo/WFCSExpo.asp.*

Network for Earthquake Engineering Simulation (NEES) Annual Meeting. Sponsor: NEES Consortium. Park City, Utah: May 21-22, 2003. This meeting offers participants the opportunity to explore research topics for the future, learn about funding plans from the National Science Foundation, and network with others from the national earthquake engineering community. Meeting information is available through the *NEES Consortium, 1301 South 46th Street, Richmond, CA 94804; (510) 231-9557; http://www.nees.org/.*

The Big Flood: North Sea Storm Surges—An International Scientific Meeting. Sponsors: Risk Group, the Tyndall Center, Halifax General Insurance Services Limited, and the British Geomorphological Research Group. London, England: May 23, 2003. The meeting's agenda includes talks on storm surge histories, the present condition of North Sea structural defenses, inundation modeling of coastal floods, risk perception and policy, public health and social impacts, and London's vulnerability. For more information, contact *Maria Sylvester, Cambridge Architectural Research Ltd., Unit 6, 23-25 Gwydir Street, Cambridge, CB1 2LG, U.K.; tel: +44-1223-460475; e-mail: maria@carltd.com; http://www.arct.cam.ac.uk/curbe/floods.html#bigflood.*

NFIP 2003 Flood Conference. Sponsor: National Flood Insurance Program (NFIP). San Francisco, California: May 27-30, 2003. Titled "Keeping Risk at Bay," this conference is designed for insurance companies, agents, claims adjusters, government officials, real estate professionals, surveyors, and more. Complete information is available from *Catherine King, 2003 National Flood Conference, 7700 Hubble Drive, Lanham, MD 20706; (301) 918-1439; e-mail: catheriner.king@fema.gov; http://bsa.nfipstat.com/.*

*Homeland First Response Conference. Sponsors: KGB Media, **JEMS** Magazine, and **Fire-Rescue Magazine**. Los Angeles, California: June 4-7, 2003.* This conference is directed at all members of the response community, including law enforcement, fire, rescue, EMS, military, industry, and all levels of government. Its goal is to create an open discussion forum about unified solutions for major incident readiness. Conference details are available from *KGB Media, LLC, 679 Encinitas Boulevard, Suite 211, Encinitas, CA 92024; (760) 632-8280, ext. 200; http://www.HomelandFirstResponse.com.*

17th Annual Governor's Hurricane Conference. Sponsors: Florida Department of Community Affairs, Florida Emergency Preparedness Association, and the American Red Cross. Tampa, Florida: June 9-13, 2003. Workshop sessions include emergency services, human resources, infrastructure, policy/planning, and recovery and mitigation. This year's theme is "protecting the homeland from hurricanes:

an all-hazards approach." Complete information is available from the *Governor's Hurricane Conference, P.O. Box 279, Tarpon Springs, FL 34688-0279; (727) 944-2724; http://www.flghc.org/.*

Inaugural Conference of the European Telecommunications Resilience and Recovery Association (ETR2A). Sponsor: ETR2A. Newcastle upon Tyne, U.K.: June 11-13, 2003. This association is based at the Disaster and Development Centre at Northumbria University, and key topics will be the financial implications of recovery to businesses, communications resilience, business continuity planning, disaster preparedness and response, and managing risks and hazards. Complete details are available from *ETR2A, tel: +44 191 241 4523; e-mail: info@etr2a.org, http://www.etr2a.org.*

Emergency Response Preparedness: Business Continuity Planning in Uncertain Times. Sponsor: Gas Technology Institute (GTI). Washington, DC: June 16-17, 2003. Conference highlights include an interactive, action-based simulation that will address integrated continuity plans and responses. Conference information is available from *Susan Robertson, GTI, 1700 South Mount Prospect Road, Des Plaines, IL 60018; (847) 768-0783; e-mail: education@gastechnology.org.*

European Flooding: Managing the Risks. Sponsor: European Water Agency, and Environment Agency. Thames Barrier, U.K: June 17-18, 2003. This conference will consider past, present, and future problems in flood management. As well as looking back 50 years, speakers will focus on changes in weather extremes, lessons learned, and policy implications of present-day flood management activities. Information is available from *Bob Earll, CMS, Candle Cottage, Kempley, Glos, GL18, 2BU, U.K.; tel: 01 531 890 415; http://www.ciwem.org.uk/events/efcp.pdf.*

School Resource Officers School Safety Conference. Sponsor: National Association of School Resource Officers (NASRO). Orlando, Florida: June 29-July 4, 2003. More information is available from *NASRO, 1601 NE 100th Street, Anthony, FL 32617; (888) 316-2776; http://www.nasro.org/home.asp.*

Government Symposium on Information Sharing and Homeland Security. Sponsor: National Conference Services, Inc. (NCSI). Philadelphia, Pennsylvania: June 30 - July 2, 2003. This year's event will focus on technology solutions for information sharing among key agencies at the federal, state, and local levels. There will be interactive sessions directed at first responders, members of the Department of Homeland Security, Congress, and the international community. Complete information is available from *NCSI; 6440-C Dobbin Road, Columbia, MD 21045; (301) 596-8899; http://www.federalevents.com/ishs/index.html.*

3rd International Symposium on Integrated Disaster Risk Management (IDRM-2003). Sponsor: Science for Global Insight. Kyoto, Japan: July 3-5, 2003. What does integrated disaster risk management actually mean for research and practice? This conference will explore issues of integrated disaster risk management in real-world, regional contexts with a focus on regional vulnerability to natural catastrophes, multiple-hazard management, and anticipatory approaches to deal with uncertainties of the future environment. For registration information, contact *Keiko Saito, Integrated Management for Disaster Risk Research Division, Disaster Prevention Research Institute, Kyoto University, Goka-sho, Uji, Kyoto 611-0011, Japan; tel: 81-774-38-4325; e-mail: saito@idrm03.dpri.kyoto-u.ac.jp; http://www.iiasa.ac.at/Research/RMS/dpri2003/?sb.*

Eleventh Course on Communities Based Disaster Risk Management (CBDRM-11). Sponsor: Asian Disaster Preparedness Center (ADPC). Bangkok, Thailand: July 21-August 2, 2003. This course will explore how to design and implement programs for reducing vulnerability to hazards and discuss ways to promote a "culture of safety." Exercises and simulations will provide experience in risk assessment and risk management planning. For more information contact *ADPC, P.O. Box 4, Klong Luang, Pathumthani 12120, Thailand; tel: (66 2) 516-5900-10; e-mail: tedadpc@adpc.net; http://www.adpc.net/training/te-cbdrm11.html.*

Geo-Trans 2004. Sponsor: Geo-Institute of the American Society of Civil Engineers (ASCE). Los Angles, California: July 27-31, 2004. This conference will focus on geotechnical engineering for transportation projects such as bridges, tunnels, underground structures, and corridors. Seismic design, risk assessment, geographic information systems, and retaining structures are among the topics to be presented. Complete information is available from *ASCE, 1801 Alexander Bell Drive, Reston, VA 20191; (703) 295-6350; e-mail: conf@asce.org; http://www.asce.org/conferences/geotrans04/.*

Fire-Rescue International 2003. Sponsor: International Association of Fire Chiefs (IFAC). Dallas, Texas: August 22-25, 2003. This conference is designed to provide all fire service personnel with the opportunity to participate in workshops that address fire service leadership, management and operations, leading combination departments, the political environment, fire chief survival, staffing, and diversity issues. A detailed conference brochure will be available soon. For complete information, contact *IFAC, 4025 Fair Ridge Drive, Fairfax, VA 22033; (703) 273-0911; http://www.iafc.org/conference.shtml.*

46th Annual Meeting: Engineering with an Attitude. Sponsor: Association of Engineering Geologists (AEG). Vail, Colorado: September 10-12, 2003. Of special interest to ***Observer*** readers are programs on seismic hazards, landslide and debris flow hazards, environmental hazards and remediation, risk assessment and geology, slope stability, and more. For more information, contact *Julie Keaton, AEG, P.O. Box 460518, Denver, CO 80246; (303) 757-2926; e-mail: aegjuliek@aol.com; http://www.aegweb.org.*

Fifth Course on Flood Risk Management (FRM-5). Sponsor: Asian Disaster Preparedness Center (ADPC). Beijing, P.R. China: September 15-26, 2003. This course offers an integrated approach to flood response using lessons learned by Asian countries. Experiences with structural, nonstructural,

and less structural strategies will be discussed to enable participants to understand causes of floods and flood damage and create specific mitigation recommendations. For more information contact *ADPC, P.O. Box 4, Klong Luang, Pathumthani 12120, Thailand; tel: (66 2) 516-5900-10; e-mail: tedadpc@adpc.net; http://www.adpc.net/training/tefrm5.html*.

Sixth Annual Conference: Innovations in Disaster Psychology–Time for a New Paradigm? Sponsor: Disaster Mental Health Institute (DMHI). Rapid City, South Dakota: September 18-20, 2003. Sessions include general disaster psychology, research, disaster psychology for children, and international issues. The conference format includes small group discussions and plenary sessions summarizing group activity. Complete information is available at *DMHI, University of South Dakota, SDU 114, 414 East Clark Street, Vermillion, SD 57069-2390;(800) 522-9684; http://www.usd.edu/dmhi/conf03/*.

International Association of Geomorphologists (IAG)Regional Conference. Sponsors: IAG and Mexican Society of Geomorphology. Mexico City, Mexico: October 17-November 2, 2003. The conference is designed for geomorphologists and professionals from associated disciplines interested in geomorphic hazards and environmental topics related to disasters. The goal is to foster an exchange of techniques, experience, knowledge, and ideas about geomorphic hazards. For more information, contact *Irasema Alcantara-Ayala, Institute of Geography, UNAM, Circuito Exterior, Ciudad Universitaria Coyoacan, 04510, Mexico, D.F; tel: (+525) 56 22 43 39, ext. 45 466; e-mail: IAGMEXICO2003@igiris.igeograf.unam.mx; http://www.smg.igeograf.unam.mx/smg/soc_geom.html*.

Terrain Data: Applications and Visualization−Making the Connection. Sponsor: Imaging and Geospatial Information Society (ASPRS), National Aeronautics and Space Administration, National Imagery and Mapping Agency, National Oceanic and Atmospheric Administration, and U.S. Geological Survey. North Charleston, South Carolina: October 25-30, 2003. This conference will focus on the evolving technology and applications that have been developing over the past two years. There will be sessions on homeland security, disaster response technology, research and development, and more. More information is available from *Terrain Data Conference 2003, ASPRS, 5410 Grosvenor Lane, Suite 2003, Bethesda, MD 20814-2160; e-mail: kimt@asprs.org; http://www.asprs.org/terrain_data2003/index.htm*.

30th International Symposium on Remote Sensing of the Environment (ISRSE): Information for Risk Management and Sustainable Development. Sponsors: Pacific Disaster Center, East-West Center, National Aeronautics and Space Administration, and University of Arizona. Honolulu, Hawaii: November 10-14, 2003. The overall theme of this conference is the use of Earth observation systems in understanding and managing our planet's environment, with particular emphasis on natural hazards and sustainability. For more information contact *ISRSE, c/o Office of Arid Lands Studies, University of Arizona, 1955 East Sixth Street, Suite 205, Tucson, AZ 85719; (520) 621-3816; e-mail: isrse@email.arizona.edu; http://isrse.pdc.org*.

The 2nd International Wildland Fire Ecology and Fire Management Congress held jointly with the 5th Symposium on Fire and Forest Meteorology. Sponsors: American Meteorological Society (AMS), Association for Fire Ecology, International Association of Wildland Fire, Society of American Foresters, and Nature Conservancy. Orlando, Florida: November 16-20, 2003. This conference includes sessions on fire ecology, wildlfire management and suppression, fire technology, social aspects of fire, remote sensing, and more. Abstracts are due June 2, 2003. Information is available from *AMS, 45 Beacon Street, Boston, MA 02108-3693; (617) 227-2426; e-mail: amsmtgs@ametsoc.org; http://www.ametsoc.org/AMS/meet/FAINST/5fire2fireeco.html*.

The 8th Annual Research Event of the Fire Service College. Sponsor: Fire Service College. Moreton-in-Marsh, U.K.: November 19-20, 2003. The event brings together an audience of researchers and practitioners interested in issues related to fire and emergency management. For further information, contact *Anne Eyre; tel: (01926) 427939; e-mail: anne.eyre@traumatraining.com.*

2003 Society for Risk Analysis (SRA) Annual Meeting. Baltimore, Maryland: December 7-10, 2003. The theme for the meeting is "bridging risk divides," and it will highlight building links among risk disciplines and sectors such as academia, industry, government, and nonprofits. For more information about abstract submission or the meeting, contact *SRA, 1313 Dolley Madison Boulevard, Suite 402, McLean, VA 22101; (703) 790-1745; e-mail: sra@burkinc.com; http://www.sra.org*.

Seventh International Conference on the Geology of the Arab World. Sponsor: Geology Department of Cairo University. Cairo, Egypt: February 16-19, 2004. This conference will address new research contributions from the earth sciences and their environmental, industrial, and development applications in the Arab world. There will be a session on environmental hazards. Conference information is available from the *General Secretary, Geology Department, Cairo University, Giza, Arab Republic of Egypt; tel: 002 02 567-6858; e-mail: gaw7@hotmail.com or melsharkawi@hotmail.com; http://gaw7.netfirms.com/*.

EC04 Conference. Sponsor: International Erosion Control Association (IECA). Philadelphia, Pennsylvania: February 16-20, 2004. Relevant sessions include slope stabilization, community and government partnering, and natural disaster recovery. For conference information, or information about abstract submission, contact *IECA, P.O. Box 774904, Steamboat Springs, CO 80477; (970) 879-3010; e-mail: ecinfo@ieca.org; http://www.ieca.org*.

Recent Publications

Below are summaries of some of the recent, most useful publications on hazards and disasters received by the Natural Hazards Center. Due to space limitations, not all publications include a description. However, all items contain information on how to obtain a copy. A complete bibliography of publications received from 1995 to the present can be found on our web site: *http://www.colorado.edu/hazards/bib/bib.html*.

All Hazards

"*Canadian Natural Hazards Assessment,*" ***Journal of the International Society for the Prevention and Mitigation of Natural Hazards****, Vol. 28, Issue No. 2-3 (March 2003). Annual subscriptions: $847.00, institutional; $164.00, individual. To obtain a subscription, contact Kluwer Academic Publishers, Customer Service Department, P.O. Box 358, Accord Station, Hingham, MA 02018-0358; (781) 871-6600 or (866) 269-9527; fax : (781) 681-9045; e-mail: kluwer@wkap.com; http://www.kluweronline.com/issn/0921-030X.*

This special issue is devoted to an assessment of natural hazards and disasters in Canada. Articles address disaster management, community planning, and public participation; achieving sustainable hazard mitigation; the contribution of philosophy to hazards assessment and decision making; a general framework for mitigation-oriented planning assessments of mobile telecommunications lifelines; seismic hazard mitigation for buildings, and other topics.

American Disasters. *Steven Biel, editor. 2001. 416 pp. $18.00. To order, contact New York University Press, 838 Broadway, 3rd Floor, New York, NY 10003-4812; (800) 996-6987; customerservice@nyupress.org; http://www.nyupress.org/product_info.php?cPath=28&products_id=2762.*

Disasters reveal something about the society in which they occur, and this book explores the lingering social and cultural impacts of American disasters. Chapters examine the immediate and long-term responses to disasters throughout history, from hurricanes and British colonial society, through the 1909 San Francisco earthquake, the great Chicago fire, the Challenger disaster, and the Exxon Valdez oil spill, among others. Contributing authors highlight how Americans have understood and explained disasters and how our culture interprets and gives meaning to disaster response and recovery.

Floods, Droughts, and Climate Change*. Michael Collier and Robert H. Webb. 2002. 160 pp. $17.95. To purchase a copy, contact the University of Arizona Press, 355 South Euclid, Suite 103, Tucson, AZ 85719; (520) 621-1441; fax: (520) 621-8899; http://www.uapress.arizona.edu.*

Floods, Droughts and Climate Change provides an introduction to climate patterns that links isolated and dramatic events to the forces, human and otherwise, behind the weather. The authors describe climate variability and its impacts, emphasizing the natural, long-term mechanisms of climate change. Topics also include the atmosphere, the geology of climate, winds, oceans and air, climate history, El Niño, hurricanes, and global warming.

Disaster Reduction for Sustainable Mountain Development*. 2002. 16 pp. Free. Copies can be obtained from the UN Inter-Agency Secretariat for the International Strategy for Disaster Reduction (ISDR), Palais des Nations CH-1211, Geneva 10, Switzerland; fax (41-22) 917-0563. The complete report can also be downloaded from http://www.unisdr.org/unisdr/Final%20mountain%20booklet.pdf.*

Mountain communities are especially vulnerable to natural disasters. In conjunction with the International Year of the Mountain 2002, this booklet presents key concepts about integrated mountain development, natural hazards, and risk reduction. The publication highlights successful disaster reduction programs in mountain communities, and provides a global overview of disaster statistics.

Best Practices in Natural Hazards Planning and Mitigation*. 2003. 57 pp. Free. The report is available on-line from the Colorado Department of Local Affairs: http://www.dola.state.co.us/smartgrowth.*

This state-level report features an array of land use planning practices, strategies, and resources for addressing development in areas subject to natural hazards, including wildfire, flooding, swelling or expansive soils, avalanches, and landslides. Contact information for each jurisdiction is also included. Planning practices range from overlay zoning districts and defensible space requirements for development in the wildland/urban interface to regulatory and permitting processes that limit development in floodplain areas. The report also includes a section detailing local government drought policies and programs.

Comprehensive Emergency Management for Local Governments: Demystifying Emergency Planning*. James A. Gordon. 2002. 212 pp. $89.00. Copies can be purchased from Rothstein Associates, (202) 740-7444 or (888) 768-4783; e-mail: info@rothstein.com; http://www.rothstein.com.*

This guide was written for staff in small to mid-sized local governments who are preparing for natural and human-caused emergencies. It includes an introductory chapter on the nature of local government emergency planning and a final chapter of tips on "putting it all together." Also included are detailed chapters on each of the four phases of comprehensive emergency management—mitigation, preparedness, response, and recovery.

Why Can't We Talk? Working Together to Bridge the Communications Gap to Save Lives—A Guide for Public Officials. *2003. 104 pp. Free. Available electronically from the Department of Justice AGILE program at http://www.agileprogram.org/ntfi/ntfi_guide.pdf.*

This publication, written by the National Task Force on Interoperability, was developed as a result of the ongoing dialogue among state and local decision makers and public safety officials to address why many public officials working in the same jurisdiction cannot easily communicate. This inability is a threat to public safety and often results in the loss of lives and property. A task force comprised of 18 national associations representing a wide array of interests collaborated on this guide.

Communicating in a Crisis: Risk Communication Guidelines for Public Officials. *SMA 02-3641. 2002. 96 pp. Free. Copies may be obtained from the U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration, Mental Health Services Clearinghouse, (800) 789-2647; http://www.riskcommunication.samhsa.gov/RiskComm.pdf.*

Sound and thoughtful communication can help public officials to prevent ineffective, fear-driven, and potentially damaging public responses to serious crises. This primer was written with the goal of providing a resource for public officials about the basic tenets of effective communication, with a special focus on the media. There are steps that public officials can take in advance of any incident to better prepare communities, risk managers, elected officials, public health officials, and others to respond to the management challenges of crises and disasters.

The Public Transportation System Security and Emergency Preparedness Planning Guide. *DOT-VNTSC-FTA-03-1. 2003. 181 pp. Free. Individual copies can be requested from the U.S. Department of Transportation, 400 7th Street, S.W., Washington, DC 20590; (202) 366-4000. The document can also be downloaded from http://www.transit-safety.volpe.dot.gov/publications/security/PlanningGuide.pdf.*

Recent events have focused renewed attention on the vulnerability of the nation's critical infrastructure to catastrophic events, including terrorism. This guide was prepared to assist public transportation systems in planning for and responding to major security threats and emergencies. It emphasizes the importance of developing critical relationships, preparing strategies and policies, and setting training and funding priorities.

Transportation Disaster Response Handbook. *Jay Levinson and Hayim Granot. 2002. 290 pp. $70.00. Copies are available from the Disaster Recovery Journal Bookstore, P.O. Box 510110, St. Louis, MO 63151; (314) 894-0276; e-mail: drj@drj.com; http://www.drj.com/bookstore/drj617.htm.*

This handbook presents information and strategies for dealing with all types of disasters and looks at the unique aspects of transportation-related incidents. It outlines how to prepare for emergencies, what to expect during a disaster, how individuals within emergency agencies should respond, and how these agencies can quickly mobilize to minimize damage and provide assistance to victims. There are chapters that discuss disaster preparedness plans, assessing incidents as they occur, assisting victims and support emergency personnel, coordinating with emergency units and aid groups, searching for physical evidence, dealing with the media, and other topics.

Health Care at the Crossroads: Strategies for Creating and Sustaining Community-Wide Emergency Preparedness Systems. *2003. 52 pp. Free. The report can be downloaded from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) web site: http://www.jcaho.org/news+room/news+release+archives/emergency+preparedness.pdf. Further information about this report can be obtained from JCAHO, 601 13th Street, N.W., Suite 1150N, Washington, DC 20005, (202) 783-6655; fax: (202) 783-6888.*

The purpose of this report is to frame healthcare issues that must be addressed in developing community-wide disaster preparedness, delineate federal and state roles, and facilitate sustained community-based emergency preparedness across the United States. Sections address enlisting the community in preparing local response, preserving the ability to provide medical care to the community, establishing oversight, and ensuring accountability.

Orientation Manual for First Responders on the Evacuation of People with Disabilities. *FA-235. 2002. 31 pp. Free. Copies can be requested from the Publications Center, United States Fire Administration, 16825 South Seton Avenue, Emmitsburg, MD 21717; (800) 561-3356 or (301) 447-1000; fax: (301) 447-1052; http://www.usfa.fema.gov.*

The first section of this manual provides guidance on dealing with the disabled in emergency situations, such as identifying those with special needs and disabilities in the community and including them in emergency preparedness planning. The remainder of the manual contains information on types of impairment and rescue techniques in volig wheel chairs, evacuation devices, and carrying techniques.

Crisis Management in a Crowded Humanitarian Space: The Politics of Hosting Refugee Influxes. *2003. 300 pp. For ordering information, contact Crisis Management Research and Training (CRISMART), P.O. Box 27805, SE-11593, Stockholm, Sweden, Office: Valhallavägen 117; tel:+46-8-788 75 00; Fax: +46-8-788 94 57; e-mail: crismart@fhs.mil.se.*

Terrorism

New York City Department of Buildings World Trade Center Building Code Task Force Findings and Recommendations. *2003. 48 pp. Free. The report can be downloaded from the City of New York web site: http://www.nyc.gov/html/dob/pdf/wtcbctf.pdf.*

In an effort to apply the lessons from the September 11, 2001, World Trade Center collapse, the New York City Department of Buildings recently outlined the recommendations of a task force working to ensure the safety of occupants of tall buildings. The group concluded that, given the extent of damage, the ability of the structures to stand as long as they did and allow so many people to escape was remarkable. However, the task force members determined that it is possible to achieve higher levels of safety for high rise buildings. Recommendations include larger, sturdier, and more numerous stairwells; full sprinkler systems; and better protected ductwork.

Schools of Ground Zero: Early Lessons Learned in Children's Environmental Health. *Sarah Bartlett and John Petrarca. 2002. 402 pp. $21.50, American Public Health Association (APHA) members; $29.95, nonmembers.*

Terrorism and Public Health. *Barry S. Levy and Victor W. Sidel, editors. 2002. 368 pp. $41.95, APHA members; $49.95, nonmembers.*

To purchase a copy of either book, contact APHA Publications Sales, P.O. Box 753, Waldorf, MD 20604-0753; (301) 893-1894; fax: (301) 843-0159; e-mail: apha@tasco1.com; http://www.apha.org/media.

The first volume describes how public school districts in Lower Manhattan dealt with the events of September 11, 2001. At the time of the attacks, more than 6,000 children were in classrooms in the vicinity of the World Trade Center. The book focuses on the environmental health impacts on the schoolchildren and efforts to

clean up the schools in order to allow the children to return to their classrooms. Drawing on interviews with parents, teachers, New York Board of Education officials, and environmental consultants, the authors make recommendations about safeguarding the health and safety of children in times of crisis.

The second volume discusses how public health is a critical element in responding to terrorist incidents and in reducing or preventing threats from future attacks. It is designed to assist public health professionals and their organizations by providing up-to-date, science-based information on, and a practical approach to, a wide range of public health issues as they relate to terrorism. The book is based in part on scientific sessions presented at the 2001 Annual Meeting of APHA.

***Federal Manager's/Decision Maker's Emergency Guide**. 2003. 12 pp. Free. Copies can be downloaded from http://www.opm.gov/emergency/PDF/ManagersGuide.pdf.*

***A Federal Employee's Emergency Guide**. 2003. 12 pp. Free. Copies are on-line at http://www.opm.gov/emergency/PDF/ManagersGuide.pdf.*

These brochures were developed by the United States Office of Personnel Management to provide guidance to federal managers and employees regarding terrorism preparedness.

***Preparing Makes Sense: Get Ready Now**. 2003. 11 pp. Free. Copies can be requested by calling the U.S. Department of Homeland Security (DHS): (800) 237-3239. The brochure can also be downloaded from the DHS web site: http://www.ready.gov.*

***Taking Care of Ourselves, Our Families, and Our Communities. Responding to the Stress of Terrorism and Armed Conflicts**. 2003. 5 pp. Free.*

***Helping Your Child Cope**. 2003. 7 pp. Free.*

***Helping Your Teens Cope**. 2003. 7 pp. Free.*

***Self-Care for Caregivers**. 2003. 5 pp. Free.*

Each of these brochures can be downloaded from the web site of the Centre for Emergency Preparedness and Response, Health Canada: http://www.hc-sc.gc.ca/pphb-dgspsp/emergency-urgency/index_e.html.

***Will Duct Tape and Plastic Really Work? Issues Related to Expedient Shelter-In-Place**. John H. Sorensen and Barbara A. Vogt. 2001. 9 pp. Copies of the report can be downloaded from the web site of the Oak Ridge National Laboratory, Emergency Management Center: http://www.ornl.gov/EMC/EMCWeb/EMC/PublicationsMenu.html.*

***Small Business Administration: Response to September 11 Victims and Performance Measures for Disaster Lending**. GAO-03-385. 37 pp. Free. Copies can be obtained from the U.S.General Accounting Office, P.O. Box 37050, Washington, DC 20013; (202) 512-6000; fax: (202) 512-6061; TDD (202) 512-2537; e-mail: info@www.gao.gov. The complete text of the report is also available on-line at http://www.gao.gov.*

The September 11, 2001, terrorist attacks and subsequent federal action had a substantial impact on businesses in both the declared disaster areas and around the nation. In the aftermath of the attacks, Congress, among other actions, appropriated emergency supplemental funds to the Small Business Administration (SBA) to aid victims. Given the unique aspects of this disaster and changes in the program, the General Accounting Office (GAO) analyzed SBA's lending performance goals and measures; that analysis is contained in this report.

***Potential Terrorist Attacks: Additional Actions Needed to Better Prepare Critical Financial Market Participants**. GAO-03-414. 91 pp. Free. Copies can be obtained from the U.S.General Accounting Office, P.O. Box 37050, Washington, DC 20013; (202) 512-6000; fax: (202) 512-6061; TDD (202) 512-2537; e-mail: info@www.gao.gov. The complete text of the report is also available on-line at http://www.gao.gov.*

September 11, 2001, exposed the vulnerability of U.S. financial markets to wide-scale disasters. Because the markets are vital to the nation's economy, GAO assessed the effects of the attacks on market participants' facilities and telecommunications systems as well as how well they were prepared for attacks at that time. In addition, GAO examined physical and information security as well as the plans participants had in place for business continuity after the attacks. Finally, the agency looked at regulatory efforts to improve preparedness and oversight of market participants' risk reduction efforts.

Floods

***Silenced Rivers: The Ecology and Politics of Large Dams**. 2001. 430 pp. $69.95, hardbound; $25.00, paperback. To purchase a copy, contact Zed Books, 7 Cynthia Street, London, N1 9JF, U.K.; (020) 7837 4014; fax: (020) 7833 3960; e-mail: zed@zedbooks.demon.co.uk; http://www.zedbooks.demon.co.uk.*

The book explains the history and politics of worldwide dam building and why large dams have become so controversial. It details the ecological and human impacts of large dams, and shows how the arguments for dam projects in national interests are used to legitimize uneconomic and unjust projects. The author describes the technical, safety, and economic problems of dam technology; the structure of the international dam-building industry; the role played by international banks and aid agencies; and the rapid growth of the international anti-dam movement. In addition, he outlines alternatives to dams, and argues that their replacement by less destructive measures requires that the industry's practices be open to public scrutiny.

Tornadoes

***The Tornado: Nature's Ultimate Windstorm.** Thomas P. Grazulis. 2003. 324 pp. $19.95. To order a copy, contact the University of Oklahoma Press, 4100 28th Avenue Northwest, Norman, OK 73069; (800) 627-7377; http://www.oupress.com/bookdetail.asp?isbn=0-8091-3538-7.*

With chapters on storm formation, life cycle, speed, intensity, risk, and safety, this comprehensive book presents a wealth of information about tornadoes. This book includes an overview of tornadic storms, including their formation and life cycle, tornado forecasting and warnings, wind speeds, the Fujita scale of storm intensity, tornado myths, safety, numbers and records, tornadoes outside the U.S., and tornado risk. Appendices list the deadliest tornadoes in the U.S. and suggest further reading.

Earthquakes

***Seventh U.S. National Conference on Earthquake Engineering (7NCEE): Urban Earthquake Risk**. 2003. 656 pp. paperback book and CD-ROM. $200.00. (A hardbound, five-volume set is also available for $350.00.) To purchase the proceedings, contact the Earthquake Engineering Research Institute (EERI), 499 14th Street, Suite 320, Oakland, CA 94612-1934; (510) 451-0905; fax: (510) 451-5411; http://www.eeri.org.*

This book/CD-ROM set contains the proceedings of a meeting held in Boston, Massachusetts, in July 2002 to examine the risk of earthquakes in urban areas. Urban infrastructure in North America has evolved into a closely integrated and highly sophisticated network of living spaces and lifelines. As demonstrated by recent quakes, as well as the World Trade Center attack, damage or disruption can result in losses far beyond what was once believed possible. This conference provided an opportunity to assess understanding of urban earthquake risk and how to effectively prepare for and abate it. Further, with the current national focus on homeland security, it also provided an opportunity to examine whether the measures to protect against natural hazards should be a part of a multihazard protection strategy that would comprehensively include natural and technological hazards. The proceedings contains papers on seismic awareness and education, seismic design and

retrofit, loss estimation, insurance issues, lifelines and mitigation, nonstructural components, multihazard approaches, earthquake response and recovery, seismic building codes, land use and urban planning, business impacts, housing, and finance. The CD-ROM contains the full text of the final program, the full proceedings, and a comprehensive authors' index.

The USGS Earthquake Hazards Program in NEHRP–Investing in a Safer Future. *John R. Filson, Jill McCarthy, William L. Ellsworth, and Mary Lou Zoback. U.S. Geological Survey Sheet 017-03. 2003. 6 pp. Free. Copies may be obtained from the U.S. Geological Survey, Mail Stop 905, 12201 Sunrise Valley Drive, Reston, VA 20192, (703) 648-6714; http://geopubs.wr.usgs.gov/fact-sheet/fs017-03/fs017-03.pdf.*

In 1977, Congress authorized the creation of the National Earthquake Hazards Reduction Program (NEHRP) to improve understanding of earthquake hazards and to mitigate their effects. After 25 years of NEHRP, the USGS Earthquake Hazards Program is implementing research results to mitigate the effects of earthquakes through active collaboration with state geological surveys, emergency response officials, earthquake engineers, governments, and the public. NEHRP's work has resulted in dramatic improvements in earthquake preparedness and public safety in the U.S., and this fact sheet provides an overview.

Munich Re's Annual Disaster Data Fest

The Munich Reinsurance Group (MunichRe) has devoted decades to the geoscientific analysis of natural catastrophe risks, especially earthquake, windstorm, and flood, and has developed underwriting methods for dealing with them. Every year, MunichRe publishes ***Topics–Annual Review: Natural Catastrophes***. Their 2003 report describes worldwide losses caused by natural disasters in 2002 (52 pp., free). Articles include a review of the catastrophes of 2002 (complete with photos), major engineering and fire catastrophes, long-term data for natural disasters from 1950 to 2002, the summer floods in Europe, a natural hazards index for megacities, geographical under-writing, and protection of the environment and climate. In addition, the report contains three inserts: the "World Map of Natural Catastrophes 2002," a list of the "50 Significant Natural Catastrophes in 2002," and a poster listing information regarding natural catastrophes in 2002. (Each insert can also be downloaded from MunichRe's web site.)

Other recent Munich Re reports of interest to ***Observer*** readers include:

- ***High Rise Buildings*** (2000, 161 pp., free);
- ***11th September 2001*** (2001, 19 pp., free);
- ***Perspectives 2001 – Munich Re Environmental Magazine*** (2001, 69 pp., free) (contains articles on sustainable development as it pertains to insurance and investment); and
- ***Winter Storms in Europe*** (2002, 76 pp., free).

All publications are available from the *Munich Re web site: http://www.munichre.com. For further information about any of these documents, contact Münchener Rückversicherungs-Gesellschaft (Munich Re), Central Division, Corporate Communications, Königstrasse 107, 80802 München, Germany; tel: +49 (0) 89/3891-5291; fax: +49 (0) 89/3891-5696.*

Rupture in South-Central Alaska–The Denali Fault Earthquake of 2002. *Gary S. Fuis and Lisa A. Wald, compilers. U.S. Geological Survey Fact Sheet 014-03. 2003. 4 pp. Free. Copies may be obtained from the U.S. Geological Survey, Mail Stop 905, 12201 Sunrise Valley Drive, Reston, VA 20192, (703) 648-6714; http://geopubs.wr.usgs.gov/fact-sheet/fs014-03/fs014-03.pdf.*

A powerful magnitude 7.9 earthquake struck Alaska on November 3, 2002, rupturing the earth's surface for 209 miles along the Susitna Glacier, Denali, and Totschunda Faults. Although it was the strongest quake ever recorded in the interior of Alaska, stringent design specifications helped prevent any damage to the Trans-Alaska pipeline. The effects of this earthquake, along with lessons for earthquake preparedness, are profiled in this fact sheet.

Rapid Visual Screening of Buildings for Potential Seismic Hazards: A Handbook*. FEMA 154. 2003. Free.*
Rapid Visual Screening of Buildings for Potential Seismic Hazards: Supporting Documentation. *FEMA 155. 2003. Free.*
Copies of each document can be ordered from the Federal Emergency Management Agency (FEMA) Distribution Center, P.O. Box 2012, Jessup, MD 20794; (800) 480-2520; fax: (301) 362-5335.

These updated versions of two classic FEMA documents present a method to quickly identify, inventory, and rank buildings that may pose a risk of death or injury due to damage from an earthquake.

Volcanoes

Communication During Volcanic Emergencies*. 2003. 21 pp. Free. The complete report can be downloaded from the Benfield Greig Hazard Research Centre web site: http://www.bghrc.com.*

This handbook aims to improve communication between volcano monitoring scientists, emergency managers, and the media prior to and during volcanic crises. The research underpinning the handbook was undertaken on the Caribbean islands of Montserrat, Guadeloupe, and St. Vincent over the last three years. It contains examples of good practices as well as practices to avoid, essential checklists, lists of resources, an explanation of volcano warning levels, and a sample press release.

Electronic Fare

Training Slide Set for Postearthquake Safety Evaluation of Buildings*. CD-ROM. 230 slides. $35.00. Copies can be purchased from the Applied Technology Council (ATC), 555 Twin Dolphin Drive, Suite 550, Redwood City, CA 94065; (650) 595-1542; fax, (650) 593-2320; e-mail: atc@atcouncil.org.*

This CD contains 230 slides of photographs, schematic drawings, text, and lecture notes. Developed jointly by ATC and FEMA, the slide set may be used for education of the public and building professionals regarding earthquake characteristics of buildings and post-earthquake building safety evaluation. Topics include: posting notices on buildings; rapid evaluation procedures; basics of structural dynamics and earthquakes; damage inspection of wood-frame, masonry, concrete, and steel-frame structures; nonstructural elements; geotechnical hazards; hazardous materials; and field safety. Example applications are also included.

ASPEP Calls for Papers

The American Society of Professional Emergency Planners (ASPEP) has issued a call for papers for the 2003 edition of the organization's journal. Articles and papers that contribute to the advancement of knowledge and improvement in the practice of emergency management are welcome. Papers will be accepted until June 15, 2003. Submissions are due by 5:00 p.m. (PST) on April 15, 2003. All papers should be submitted via e-mail to *Bruce Binder: bbinder@myexcel.com*. For more information, e-mail or write *Bruce Binder, c/o ASPEP Journal, 8770 S.W. Goldstone Place, Beaverton, OR 97007.*

THE HAZARDS CENTER

The NATURAL HAZARDS RESEARCH AND APPLICATIONS INFORMATION CENTER was founded to strengthen communication among researchers and the individuals and organizations concerned with mitigating natural disasters. The center is funded by the National Science Foundation, the Federal Emergency Management Agency, the National Oceanic and Atmospheric Administration, the U.S. Geological Survey, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Department of Transportation, the U.S. Bureau of Reclamation, the U.S. Forest Service, the National Aeronautics and Space Administration, the Centers for Disease Control and Prevention, the Institute for Business and Home Safety, and the Public Entity Risk Institute. Please send information of potential interest to the center or the readers of this newsletter to the address below. The deadline for the next ***Observer*** is *May 16, 2003*.

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Copies of the ***Observer*** and the Hazards Center's electronic newsletter, ***Disaster Research***, are also available from the Natural Hazards Center's web site:

http://www.colorado.edu/hazards

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