MAKE A COMMITMENT

Recent Disasters and Universities

In April 1997, the Red River inundated the University of North Dakota. The University was forced to relocate critical functions such as the computer center and had to suspend many of its operations. After a month of inspection, clean-up, and repairs, the university reopened. Damages totaled $46 million.

A disaster-resistant higher education institution recognizes the threats posed by natural and man-made hazards to its campus and mission. It formulates policies, programs, and practices to assess its risk and implements these across all of its teaching, research and public service activities.

The leadership of a higher education institution understands the need to sustain the university's teaching, research, and public service responsibilities in light of the damage, repair delays, and financial difficulty that disasters can bring to a community. The goal is to withstand the effects of probable hazard events without unacceptable losses or interruptions; in other words, to be resilient.

Resiliency is characterized by the institution's ability to minimize the impact of probable hazards and limit their interruption to the mission of the university or college. This does not mean that there will be no damage from large events; indeed, damage from natural and technological disasters varies by the force and location of the event. However, a disaster-resistant university strives to mitigate this damage. Campuses vary in their definition of acceptable losses and interruption because these decisions depend on the community, the nature of the hazard, and the available resources.

Once the commitment to become has been made, the first step is to organize resources and develop a strategic plan for the process ahead. This means identifying resources on and off campus, identifying a campus leader, developing an advisory committee, and gathering information. The success of the disaster-resistant initiative depends on the extent of participation by on- and off-campus stakeholders. These stakeholders bring the commitment, knowledge, and enthusiasm needed to complete the planning process and adopt a mitigation plan.

IDENTIFY RESOURCES

On- and off-campus stakeholders are crucial to the success of any disaster-resistant initiative. The best place to begin is on campus. Higher education institutions are complex and varied organizations, but they all share a basic structure that serves as the foundation for the hazard mitigation planning process.

Start with a thorough inventory of all potential stakeholders across the three traditional divisions of academia—administration, faculty, and students. All of these groups should be involved from the very beginning of the disaster-resistant university initiative. While their stakes differ and their commitments are not likely to be equal, each will play an important role in the success of the initiative. The inventory will assist you in the next step of identifying an advisory group/committee.

University or College Administration

The active commitment and involvement of the institution's chancellor or president and chief academic and business officers is crucial. An inventory of available resources is equally important as commitment, which is presumed to exist if the planning process is to move forward.

A complete inventory of the academic and business units at the campus should be completed during this stage. Examples of common stakeholders are listed below.

University, College, School, or Division Planning Entities. Planning organizations exist at many levels of the university, and it is important to identify all of the various planning committees that might share an interest or have jurisdiction in the area of hazard mitigation before the planning process gets too far. Begin at the top with institution-wide committees and work your way down to academic departments, if appropriate. Many institutions have planning councils or committees, physical facilities committees, a master plan committee, building and grounds committees, and other such groups. These may be replicated at the college level and even at the academic department level in some cases. The identification of these committees may begin with contacting the institution's chief academic officer, meeting with college deans and department chairs, and researching accreditation documents. These committees are particularly important because they share a common focus on planning and many of their component jurisdictions will be involved in the mitigation actions once the plan is implemented. For example, an institution-wide campus master plan committee is likely to be a key player in the location of future capital improvements; since location of the built environment relative to potential hazards is a significant driver of hazard mitigation decisions, the committee's commitment to this process is important. The mission statement, jurisdiction, and membership of each committee identified in this process should be collected.

Resources

The importance of planning across all aspects of higher education is emphasized by several organizations, including the Society for College and University Planning www.scup.org, American Association of Community Colleges www.aacc.nche.edu, and the National Association of College and University Business Officers www.nacubo.org. These organizations provide college and university planners with a wide range of resources through national and regional conferences and web-based materials, including links to many university and college disaster and emergency plans.

Institutional Research. Many institutions have offices, divisions, or committees that collect and conduct institutional research. While their work is not likely to be hazard-specific, their involvement is important because they are often the repository of institutional plans and data important to the planning process. Furthermore, planners or individuals with long-range planning experience often staff them. Thus, their capability is an important resource. Locate the various campus offices that collect, analyze, and archive data and collect appropriate contact information.

Development. The Development Office is an important resource. These units are often involved in developing priorities for institutions and it is important to know where and how support for these priorities is obtained. The Development Office should be represented on the advisory committee. Individuals in this office have experience establishing public-private partnerships. Donations to the university are typically directed at projects the university has determined as priority. Although contributions to specific loss reduction projects are unlikely, capital contributions can be devoted to improving the disaster resistance of the project under consideration. Disaster resistance should be on your development office's list of goals worth promoting.

Public Service and Outreach. In much the same way as the Development Office, a unit dealing with Public Service and Outreach can be an important resource. These units are likely to have extensive information about the surrounding community and can point to existing collaboration between your institution and local, state, and emergency management organizations. They also

represent an important resource to the planning process because they often coordinate the public information aspect of the institution and can solicit and disseminate information through campus newspapers, departmental newsletters, and web pages. Public Service and Outreach can provide resources for developing press releases and can advise the planning committee on strategies for disseminating information on and off campus.

Auxiliary Enterprises. Institutions often conduct a wide range of auxiliary services, such as running a hospital, elementary school, housing and food services, parking, athletics, or related enterprises. These entities should already have an interest in hazard mitigation and should be incorporated in the overall campus planning process. While it may be necessary for these groups to go through the planning process on their own, the overall coordination of plans and the university's responsibility for the safety of its clients and continuity of services is an integral part of the overall mitigation plan. In addition to the direct services these auxiliary units provide, they may also provide a substantial amount of financial support for the institution and an interruption may exacerbate the economic consequences of a disaster to the university or college. Existing emergency operations or disaster plans should be obtained from these units and key contact people should be identified so that their policies and plans are integrated into the campus-wide plan.

Recent Disasters and Universities

On Labor Day 1998, a severe windstorm in central New York State damaged many buildings, trees, and utilities on the Syracuse University campus, forcing the closure of some residence halls and relocation of 600 students. The cost of repairs to roofs, windows, and masonry, as well as a big debris clearance bill, drove the damage figure to more than $4 million.

It is especially important to coordinate three particular administrative units that are important to the hazard mitigation planning process: Public Safety, Environmental Health and Safety, and Risk Management.

- **Public Safety.** Police, fire, and emergency medical services are involved in the initial response to virtually any natural or man-made disaster on campus. They are also an important bridge to local first responders and various emergency management agencies. Depending on the type of incident, they may also be called upon to engage in crowd control during a riot and/or to be responsible for investigating the potential cause of a man-made disaster. Campus police and fire services have emergency plans and standard operating procedures that should be incorporated into the hazard mitigation planning process. Identify appropriate individuals from these units to serve on your advisory committee.
- **Environmental Health and Safety.** Every institution has an environmental health and safety officer, or the equivalent, who is directly involved in a wide range of issues relating to the management of hazards. These individuals are a key resource for providing plans and information regarding the location of various hazards on campus. In many communities, the head of this unit or its designee may serve on the Local Emergency Planning Committee. These individuals are likely to be responsible for filing reports on campus storage and use of hazardous materials.

- **Risk Management.** Most institutions have an office that addresses issues of risk management. This office is an important resource for developing the mitigation plan because it has access to information that can be helpful in the planning process. Furthermore, individuals in this office are committed to the same goals you are—reducing the vulnerability of the institution to hazardous events. In particular, risk managers usually deal with insurance issues where benefit can be gained from comprehensive disaster planning.
- **Telecommunications and Information Systems.** The events of September 11, 2001, reminded us all of the importance of redundant communication systems and off-site backup locations for critical data. From the institutional level down to the individual faculty and staff members, data backup and storage is an important part of ensuring the integrity of the research enterprise and reducing interruptions caused by disaster. Cyber terrorism and other threats to the security of a communications network that higher education institutions depend on emphasize the importance of involving appropriate representatives of this administrative unit in mitigation planning. Their plans and interests should be identified and incorporated at the beginning of the process.
- **Physical Facilities and Project Design and Management.** The long-term goal of reducing the effect of natural and man-made disasters depends, in part, on the willingness of the institution to retrofit existing building stock and to incorporate disaster-resistant design and construction practices into new and renovated buildings. Thus, it is important to identify representatives in this area who shape the institution's built environment.
- **Staff Resources.** In addition to senior administrators, many other staff members in the units described above, as well as in other areas of the campus, spend most of their time ensuring the continuous operation of the institution. In many cases, these people are among the most receptive to a message about risk management. They are, furthermore, typically involved with managing their individual building's safety program and emergency preparedness efforts. Your

Resources

Environmental Health and Safety Officials have a professional association that is a resource for campus-based hazard mitigation planning. The group holds an annual conference where presentations are made about preparing for, responding to, recovering from, and mitigating natural and man-made disasters. The Campus Safety, Health and Environmental Management Association is a division of the National Safety Council and has web resources and contact information at www.cshema.org.

Risk management is an area where public and private institutions often differ, as private institutions are typically more concerned than public ones about insurance. This is because public institutions are generally self-insured. The University Risk Management & Insurance Association www.urmia.org conducts conferences and seminars for higher education risk managers.

Experience

Private universities that carry commercial disaster insurance can obtain extensive information on hazards and risks from the companies they do business with, or from insurance industry information groups. At some institutions, the cost of disaster insurance has become a driving force in the decision to pursue disaster resistance. Private institutions are facing staggering increases in the cost of insurance and the size of their deductibles. Comprehensive hazard mitigation planning and actions will reduce the damage to your institution and reduce reliance on insurance. The hazard mitigation planning effort at your institution should involve appropriate risk management officials.

Mitigation planning and related activities may reduce various types of insurance premiums, including flood insurance through the National Flood Insurance Program. Contact your insurance agent for more information on how mitigation actions might help manage premiums.

For an example of insurance industry efforts to promote hazard mitigation, consult the Web site of the Institute for Business and Home Safety at www.ibhs.org.

inventory should assess whether there are staff organizations that can be a resource to the hazard mitigation planning effort.

Academic Affairs

Many units in academic affairs have a substantial interest in hazard mitigation. Their interest ranges from teaching, and the importance of reducing interruption to the instructional mission of the institution, to the conduct of research and sponsored programs.

Instructional Continuity. Disasters regularly force universities and colleges to suspend their primary activity—the teaching of students. Such closures disrupt the continuity of instruction and limit the ability of the institution to deliver the services that students expect. In dramatic cases, a lengthy interruption can result in the cancellation of a semester and a refund of tuition. These interests are substantial enough that representatives of academic affairs should be contacted and information collected on the individuals who should be involved in the planning process. Since higher education institutions are often decentralized, the inventory should reflect the diversity of academic units at your institution. Prioritization of instructional needs may occur at the school, college, or even departmental level; therefore, several levels of contact may be necessary to ensure that appropriate parties are involved in this process.

Experience

Academic units that often house researchers or teachers with specialization in hazards or emergency planning issues include, but are not limited to: architecture, economics, emergency management, engineering, geography, geology, earth sciences, urban planning, public administration, sociology, and political science. These units represent a good place to start an inventory of faculty resources available on your campus. Use a "snowball" approach and ask the faculty you contact about others they might know who conduct research or teach in this area. Ask those individuals about their work and that of others. In short order a comprehensive list of potentially helpful faculty will emerge.

Faculty Interests. The disaster mitigation plan requires adoption and implementation across a wide range of faculty interests. Unless the discipline of a faculty member makes him or her conscious of the impacts or environmental risks of disasters, professors are unlikely to be interested in these topics. And yet, they stand to lose a great deal if a disaster hits their university and destroys buildings, laboratories, computer systems, databases, books and papers, course notes, and specimen collections. An inventory of faculty members can help identify possible campus resources. Any number of academic units on campus may house faculty members who have teaching or research interests in the area of hazards or emergency management. Identifying these individuals early will allow you to determine the appropriateness of involving them in the planning process; it also provides potential sources of research and technical specialization for the next phases in the process, which include conducting a risk assessment and writing the plan.

In addition to individual faculty members, most institutions have a faculty governance structure that includes committees with jurisdiction relevant to the disaster mitigation planning process. Some duplication of membership on these administrative and faculty committees inevitably occurs. Indeed, your inventory of administrative units probably will generate the names of these committees and you may have already contacted most of them. It is important, however, to complete the circle by ensuring that all faculty-based committees are identified. On many campuses, issues relating

Recent Disasters and Universities

On January 19, 2000, a fire raced through an old residence hall at Seton Hall University in the middle of the night. Students leapt from windows, crawled out stairways, and a number were rescued by firefighters. The fire killed three students, and seriously injured 12 more. The residence hall did not have a sprinkler system.

to instruction may be determined exclusively by faculty committees; thus, they may become an important resource during the adoption and implementation phase of the plan.

Sponsored Programs and Research. In addition to protecting academic instruction, institutions must protect their investment in research and scholarship. A fundamental purpose of any disaster-resistant initiative is to protect the university's research enterprise; therefore, the office at your institution that oversees the conduct of research and sponsored programs is an important resource. This office may have plans, policies, and staff that address the general issue of protecting and limiting the interruption to research at the university. Some institutions have started to recognize the value of disaster resistance and are allocating staff support to positions such as a hazard mitigation research officer.

Moreover, these offices are also under increasing pressure from sponsors of research to ensure the protection and reduction of potential damage to the work they support—including the effects of natural and man-made disasters. The loss of important scientific materials during Tropical Storm Allison in 2001 at the University of Texas Medical Center complex and in the lab fire at the University of California Santa Cruz in 2002 brought renewed attention to the importance of reducing the effects of disasters on the research enterprise.

Student Affairs

Students are often overlooked in the hazard mitigation planning process. However, the safety of students is of paramount concern to the institution and natural and man-made hazards present vexing issues for student safety. Dorm fires, food safety, and evacuation issues all present serious concerns for university and college disaster planners. It is important to identify student services and student-based resources that are important to the disaster mitigation planning process.

Student Services. The division of student affairs or services has various resources important to your effort. Since these units are commonly responsible for on- and sometimes off-campus living arrangements and for food delivery on campus, they have communication plans and building safety information that should be inventoried. When you get to the stage of communicating hazard mitigation information across campus, these units will be very important, and involving them early will facilitate their commitment later.

Student Organizations. Student organizations should be canvassed for potential stakeholders. Student committees often mirror the faculty governance structure and can be important sources of planning information. Students are by far the most difficult campus-based population to reach. While they do not necessarily affect critical campus decisions on risk reduction, they are the objects of it. If they are not aware of how to protect themselves in an emergency, there will be increased losses to life and property. While youth and optimism may make students less aware of risks, the same cannot be said of their parents. Educating students about risk reduction and assuring their parents are part of the disaster-resistant university effort. After September 11, many parents began to raise questions about issues of safety and disaster preparedness that could have been answered, in part, by pointing to the comprehensive planning involved in the disaster-resistant university process. The steps you take to reduce your

Recent Disasters and Universities

On September 24, 2001, a tornado extensively damaged several facilities at the University of Maryland. Instructional and student services space was damaged along with several trailers that were a temporary home to the Maryland Fire Institute. Two students were killed when their car was overturned and classes were canceled for one day.

vulnerability to natural and man-made hazards can reduce the uncertainty parents and students face about the consequences that disasters can have on their safety and investment in higher education.

Alumni. Former students also serve as a potential resource. Alumni may support the goals and program of the disaster-resistant university effort financially, politically, or directly through technical assistance. Work with your development office to identify alumni who may be able to assist you through fundraising and giving for retrofit and modernization projects and those in positions to influence government and nonprofit resource allocation. Alumni may also provide valuable technical resources in areas relevant to your planning efforts.

COMMUNITY STAKEHOLDERS

Off-campus stakeholders are important resources. Government, nonprofit, and private constituencies should be canvassed to identify appropriate resources for your effort. The level of disaster resistance of your institution is directly related to that of your community, region, and state. Collaboration reduces duplication of effort, often yields technical and/or financial assistance, and increases your likelihood of success. The actions of off-campus stakeholders can affect your disaster resistance. Likewise, the actions of your institution in preparing for, responding to, and recovering from an event can affect the disaster resistance and sustainability of the community in which it resides.

Background

Local Government Powers that Apply to Hazard Reduction. *Planning* – Although the degree of planning authority of a local jurisdiction is determined by state legislation, all local governments can use a planning process to educate. *Regulatory Power* – Local jurisdictions have the authority to regulate land use, development, and construction through zoning, subdivision regulations, building codes, design standards, and floodplain regulations. *Spending Authority* – The manner in which local jurisdictions use public funds can influence development in hazard areas. One fiscal management tool that many communities embrace is the capital improvement program, generally a 5-year plan for funding improvements to public facilities. *Taxing Power* – If the private sector encourages development in hazard areas, special taxing districts can be created to balance more equitably public investments. Preferential assessments can be used as incentives to retain agricultural and open-space uses in high hazard areas. *Acquisition* – Local governments can acquire land in high hazard areas through conservation easements and purchase or transfer of development rights.

Government

All levels of government strive to protect public health, safety, and the well-being of its citizens. As such, governments at all levels manage hazards and contribute important resources to organizations that share this purpose. Government jurisdictions commonly overlap those of the institution, and they are among the first responders to any emergency. Collaboration can improve the disaster resistance of all parties and reduce duplication of effort.

Local Government. Local communities and universities are mutually dependent on each other to prepare for disasters and reduce potential losses. Communities are the first to feel the effects of disasters. Local governments are responsible for assembling teams to address natural and man-made threats within the community and to follow a sound planning process for identifying and selecting the best solution for the community. Local governments often have specific statutory authority over your institution. They may have funding resources available and can provide technical assistance to support mitigation efforts. Some specific local government groups to canvass include:

- **Emergency Management**. Depending on your location, the

county or city is primarily responsible for emergency management in your area. Emergency management is still a developing profession and your community may have a full- or part-time emergency manager. In either case, your initial efforts should include contacting this person because he or she is essential in providing resources about disaster preparedness in your area. The local government and the university or college should have a close working relationship since reduction in risk accomplished by one necessarily benefits the other.

Emergency managers are not the only local government entities that should be enlisted, however. Many jurisdictions are now hiring hazard mitigation planners who can be valuable resources and collaborators, and traditional public safety units and state and local planning divisions can also provide data and technical assistance such as mapping. In much the same way that the faculty was inventoried, the capabilities of local government can be assessed by starting with emergency management and working your way out to include others who may be able to assist your effort.

Experience

Many institutions have learned the value of integrating their disaster-resistant university planning efforts with the activities of local government. The University of Miami exemplifies this process. By working with Miami-Dade Office of Emergency Management it has successfully mobilized financial resources through the Local Mitigation Strategy, thus working in collaboration with local government to improve its own and the community's disaster resistance. The University of Miami Director of Environmental Health & Safety serves on the Local Mitigation Strategy Steering Committee and contributes to the local government's mitigation planning activities. By working with local government, the University of Miami has been able to fully realize all of the potential resources that the local, state, and Federal agencies have to offer.

- **Planning.** Community planners have knowledge and skills that are vital to your mitigation planning effort. Planning departments maintain demographic, economic, and physical data on the community. Planners are also usually experienced at meeting facilitation and possess research skills and extensive contacts.
- **Special Districts.** Identify appropriate local schools, park districts, regional government associations, flood control districts, and fire suppression and vegetation management districts to identify potential resources and to engage in partnerships. Park districts may occupy lands near the university and their efforts at risk reduction will complement yours. Vegetation management, erosion control, mapping, and firefighting are obvious ways that the university and special districts can work together. Individuals and staff connected to these districts may possess scientific and technical capabilities that can provide hazard information, technical support, and post-disaster impact data.

Many metropolitan areas have regional government organizations that work on issues such as land use plans, transportation, and housing. Furthermore, regional planning organizations often perform the physical and economic planning functions for multi-county rural areas. These organizations gather data and sponsor planning initiatives to cope with risks; they can be of considerable assistance in providing hazard data to local governments and universities and in conducting sophisticated public information campaigns on risks and how to reduce them.

Infrastructure Providers. Three components of infrastructure warrant special attention in your efforts to identify off-campus resources.

- **Utilities.** Utility loss following a disaster creates serious problems for a community and every home and business in it, including educational institutions. The ability to respond to an

emergency is hampered by the loss of electricity, gas, water, sewers, or telephones, and recovery will be constrained as well until services can be restored.

An interruption to campus utilities may threaten research activities and materials that depend on temperature control, fluid flows, gas, or light. The history of disasters and higher education institutions includes many examples of the damage caused by utility interruptions. Even if the university owns and operates its own utilities, it may require outside assistance to make repairs and restore service. Representatives of these critical lifelines should be identified as resources and involved in your planning efforts because they have access to important information about the security of the utility connections and service at your campus.

- **Transportation.** Roads, bridges, and transit systems are critical to emergency response and business continuity. Extensive damage to transportation systems can leave a campus and its community paralyzed. Transportation specialists can provide important information and resources, particularly at institutions where evacuation is a concern. However, even at campuses where evacuation is not a prime concern, the repair and restoration of transportation systems on and off campus can determine the extent of interruption to the institution's operations.
- **Housing.** Employees' and students' houses, residence halls and apartments may be damaged by a disaster. Losing even a small percentage of the available housing stock can put significant burdens on the university, including the need to shelter displaced employees and students as well as the difficulties that may arise from the need to instruct a student population whose attention and concentration may be diverted by housing concerns. Reducing risks in community housing—owned or rented—should be a high priority for a disaster-resistant university. Student-run cooperatives and Hellenic houses are also important providers of housing. As such, it is in the best interests of the institution to involve appropriate community housing agencies and experts in the process. These individuals may be key resources as the risk assessment is conducted and the mitigation plan is developed.

State Government. The state legislature and assorted agencies play a large role in making financial resources available for increasing disaster resistance, especially if the institution is a

Experience

Sample Advisory Committee Membership
University of Washington:

- Director of Records Management Services
- Executive Director of Health Sciences Administration
- Assistant Vice President for Regional Affairs
- Director of the Institute for Hazard Mitigation Planning & Research
- Disaster-resistant University Coordinator
- Director of Student Activities and Union Facilities
- Director of the Student Health Center
- Director of Purchasing and Stores
- Representative from the Real Estate Office
- Associate Vice President for Business Services
- Associate Vice President for Facilities Services
- Director of Communication Technologies
- Director of University Computing Services
- Assistant Vice Provost for Research
- Chief of the University Police
- Associate Director of University Computing Services
- Director of News and Information
- Lieutenant from the University Police Department
- Associate Vice President for Capital Projects
- Seismology Lab Coordinator in Geophysics
- Director of Academic Services & Facilities
- Director of Environmental Health & Safety
- Representative from University Relations
- Representative from Faculty Council on University Facilities and Services

From the community:

- Program Manager for King County Emergency Services Public Health
- Local risk consultant
- Director of Seattle Emergency Management Section
- Manager of King County Office of Emergency Management
- Local planning analyst

public one. In addition, if the campus is part of a larger statewide system, budget allocations may be controlled at that level. Your inventory should identify resources available from these groups and potential stakeholders.

For both public and private universities and colleges, extensive planning and technical assistance for risk reduction can come from state agencies such as the office of emergency management and departments such as planning, environmental agencies, geological services, water resources conservation, and forestry. There may also be hazard-specific offices such as a seismic safety commission or flood control commission that can assist your disaster-resistant university planning efforts. Additionally, states receive financial assistance from the Federal government to distribute to local entities (including higher education institutions) for hazard mitigation purposes; however, funds are often limited, requiring the state to prioritize their distribution. Thus, it is critical to establish and maintain relationships with state staff that administer these program funds.

States are required to uphold Federal regulations intended to reduce hazard losses, and their role in coordinating hazard mitigation planning has become even more important with the passage of the Disaster Mitigation Act of 2000. A good place to start is to contact your State Office of Emergency Management and State Hazard Mitigation Officer. Local emergency management officials can help you identify this person and may even serve as a liaison to this office. A network of State Hazard Mitigation Officers is maintained at www.hazmit.net.

Federal Government. The most important resource at the Federal level is the Federal Emergency Management Agency (FEMA) within the Department of Homeland Security. FEMA is the lead Federal agency responsible for providing technical assistance to other Federal agencies and to state and local governments for mitigation planning and project implementation. FEMA is leading the implementation of the Disaster Mitigation Act of 2000. FEMA's mission is to reduce loss of life and property and to protect the

Background

Stafford Act/Disaster Mitigation Act of 2000. The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 100-107) authorizes funding for the Federal disaster relief (including mitigation) programs in place today. The Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390, as amended) is the primary authority for mitigation planning. The DMA amends the Stafford Act Section 409 and provides for a new and revitalized approach to mitigation planning. Section 322 of the Act emphasizes the need for state, local, and tribal entities to closely coordinate mitigation planning and implementation efforts. In addition, Section 322 creates incentives for increased coordination and integration of mitigation activities at the state level. Together, the Stafford Act and DMA 2000 provide an array of funding for planning projects and technical assistance to communities. Below is a partial list of programs authorized by these acts:

- The Pre-Disaster Mitigation Program (PDM) authorized by the DMA 2000, provides funding to states and communities for cost-effective hazard mitigation activities that complement a comprehensive mitigation program, and reduce injuries, loss of life, and damage and destruction of property before a disaster strikes.
- The Hazard Mitigation Grant Program (HMGP) authorized in Section 404 of the Stafford Act, provides grants to states and local governments to implement long-term hazard mitigation actions after a major disaster declaration.
- The Individual and Family Grant Program is authorized by Section 411 of the Stafford Act and authorizes grants after a disaster to cover serious unmet, disaster-related real property losses.
- The Public Assistance Program (PA) is authorized under Section 406 of the Stafford Act. The program provides funding after a disaster for the repair, restoration, or replacement of damaged facilities belonging to governments and private nonprofit entities, and for other associated expenses, including emergency protective actions and debris removal, in addition to funding mitigation actions related to repair of the existing damaged facility.

Both public and private universities and colleges have benefited from the Hazard Mitigation Grant Program and the Public Assistance Program. It is important to familiarize yourself with these programs, their regulatory framework, and the appropriate person in your state who oversees them.

nation's critical infrastructure from all types of hazards through a comprehensive, risk-based emergency management program of mitigation, preparedness, response, and recovery. FEMA is organized into regions and your local or state emergency management officials can put you in contact with appropriate regional representatives who can share with you the resources that FEMA provides for hazard mitigation planning. Many FEMA documents are profiled in this guide; however, technical assistance is also available and should be considered an important resource for your work. Appendix C provides contact information for each FEMA Regional Office.

It is particularly important to become familiar with the variety of existing Federal Disaster Assistance Programs. These programs may provide funding for hazard mitigation actions and/or the repair, restoration, or replacement of facilities at your institution following a disaster.

In addition to FEMA, a wide range of other Federal agencies may be able to provide valuable resources for your work. The U.S. Geological Survey, National Weather Service, National Oceanic and Atmospheric Administration, and the Departments of Energy, Housing and Urban Development, Education, and Transportation, for example, are also potential additions to your inventory. Identify local, state, or regional offices of these agencies and determine the availability of individuals and resources. The FEMA CD, Mitigation Resources for Success (FEMA 372) provides reference information on other federal agency programs that may provide hazard mitigation resources.

Resources

The Federal Emergency Management Agency web site www.fema.gov/fima/planning.shtm contains a great deal of information helpful to your planning effort.

Nonprofit Organizations

Emergency management in the United States has always relied heavily upon nonprofit organizations to engage in disaster mitigation, preparedness, response, and recovery. In particular, your inventory should include resources available from local units of the American Red Cross and Salvation Army. The American Red Cross provides extensive preparedness materials that can be leveraged in your efforts to prepare faculty, staff, and students for possible disasters. The American Red Cross typically runs emergency shelters, so if your campus has a public shelter or will be sheltering your students and employees, it would be wise to involve them in your hazard mitigation planning activities. Similarly, the Salvation Army is important during the disaster response and recovery phases and can provide important resources for temporary housing and feeding displaced students after a disaster. Since many students may live off campus, they are particularly susceptible to displacement by natural and man-made hazards. Nonprofit organizations may be able to assist you in preparing for such a situation. The National Voluntary Organizations Active in Disaster (NVOAD) can provide such information. Please see www.nvoad.org.

In addition to the American Red Cross and the Salvation Army, other local voluntary organizations such as the United Way can provide important resources for your efforts. Early contact ensures that you have the widest possible capability for your effort. These organizations may not provide assistance to the university directly, but those that provide food and clothing, shelter, housing, and medical care can help the community deal with its affected populations. The university should be familiar with local nonprofit organizations and their services and should enter into mutually supportive agreements where appropriate.

Private Sector

The private sector can contribute important resources to the disaster-resistant planning initiative. As with the operations of the local government, business and industry practices in your area help determine the overall disaster resistance of the community, which in turn affects the disaster resistance of the university. This is a symbiotic relationship, as businesses that supply the university and/or serve the needs of students depend on the university being open and operating, and the university's quick resumption of its operations following a disaster will have a favorable impact on businesses in the community. Thus, businesses that contribute to the overall well-being of the community may be willing to provide technical assistance, staff support, and even financial support to the disaster planning effort. Depending on the situation, this technical assistance may be paid for in full or be donated in-kind.

Worksheet #1 in Appendix A will assist you in identifying appropriate partners.

Experience

Sample Advisory Committee Membership
University of California, Berkeley:

- Vice Chancellor for Capital Projects
- Vice Chancellor for Resource Planning and Budget
- Assistant Vice Chancellor for Research
- A dean of Letters and Science
- Chair of the Academic Senate
- Two engineering professors
- One architecture professor
- Director of Business Services
- Director of Emergency Preparedness
- Director of Community Relations
- From the Office of the President, the Assistant Vice President for Facilities services

From the community, there are representatives of the City Manager and two businesses: a small property management company, and the Bayer Corporation. Berkeley was also fortunate to have the participation of its Bay Area neighbor, Stanford University; Stanford Vice Provost brings to the committee Stanford's experience recovering from the 1989 Loma Prieta earthquake, and their ongoing risk management concerns.

FORM AN ADVISORY COMMITTEE

An advisory committee should be established once the inventory of available resources has been completed. The inventory produced a list of potential stakeholders from the institution and the community. Now it is time to begin the process of determining who will help make decisions about the process and who will serve primarily as a resource.

Decisions about how to deal with the effects of hazards on an institution impact all levels of the organization, and stakeholders from the groups described above should be considered for inclusion on the advisory committee. Hazard mitigation involves academic, administrative, and student leadership. Work with, and appoint professionals on the campus who are already involved in emergency preparedness, crisis response, or risk management, but make certain that the committee is made up of people whose views extend far beyond what is typically thought of as emergency services or environmental health and safety.

How large should the committee be? The answer lies, in part, with the size of your stakeholder inventory. If you uncovered a small number of stakeholders, a committee that includes all of them would be satisfactory. If, on the other hand, you

Experience

When choosing advisory committee members, look for people who:

- Possess the ability to command respect across the institution and in the community;
- Are visionary and open to new ideas;
- Have the desire, time, and commitment to support hazard mitigation issues;
- Have the ability to communicate planning and hazard concepts to colleagues and members of the community; and
- Understand, and are able to operate effectively within, the political and administrative environment at your institution.

ended up with a long list of resources, perhaps a two-level organizational structure involving subcommittees and/or workgroups is more appropriate, with the chair of each committee serving on a steering committee. Regardless of the structure that is chosen, the committee that makes the final decisions should be small enough so that members can actively participate and have a sense of ownership, yet large enough to include important points of view and key decision-makers. The committee must be able to build the relationships necessary to facilitate compromise and engender commitments to implement the disaster mitigation plan.

IDENTIFY A COORDINATOR OR PROJECT MANAGER

The project must have a manager, preferably someone with the time and authority to focus exclusively on the activities related to the disaster-resistant university. The project manager provides staff support to the advisory committee and may be housed in a variety of different units on campus. A full-time coordinator is preferable so that he or she can spend the time necessary to understand the full complexity of the situation facing the campus. A part-time coordinator would be less likely to develop and leverage partnerships with the community or to be able to carefully include the variety of campus units that need to be involved. Regardless of the unit the project manager is assigned to, he or she should have access to and support from a senior administrator.

The project manager may come from the campus or be hired from outside. It may be expedient to redirect the tasks of someone familiar with the campus' operations, personalities, and culture. On the other hand, an off-campus specialist in loss reduction may be more effective in a shorter period of time. The ideal situation differs from campus to campus.

The project manager should become involved in the activities of any group on campus that is working on related issues. The projects of those charged with emergency preparedness, risk management, or crisis response are obvious cooperative opportunities, but look beyond them to other initiatives in resource planning, space management, instructional improvements, research facilities, and business operations. Collaborating with faculty, administrative staff, and students on various tasks will allow the manager to introduce the disaster-resistant university concept to others and help to establish a mutually supportive atmosphere.

Authorize the Coordinator and Advisory Committee

Once the membership of the advisory committee has been determined and a project manager identified, a formal endorsement of their composition and work must be obtained. While the chief administrative officer probably will have already announced the institution's commitment to becoming disaster-resistant, it is nevertheless important for the committee members and project manager to get a firm statement of support and an appropriate charge.

The likelihood of success will be enhanced if multiple jurisdictions recognize the planned efforts of this group. In addition to a formal charge from the chief academic officer,

Experience

Depending on your situation, it may be appropriate to identify a project coordinator prior to the inventory and designation of an advisory committee. In other cases, an interim coordinator may be designated to begin the process with the permanent coordinator chosen by the advisory committee. Both strategies have benefits and drawbacks and the decision is likely to be situation- and institution-specific.

endorsement by the faculty senate, staff associations, and student government, as well as local government jurisdictions, can go a long way toward energizing committee members and providing a solid foundation for the next phase of the process.

Establish a Timeline

Once the advisory committee and project leadership is in place, a timeline should be established. The primary phases of this process include *Phase 1, Organize Resources; Phase 2, Hazard Identification and Risk Assessment Study; Phase 3, Developing the Mitigation Plan;* and *Phase 4, Adoption and Implementation.* The process must allow for sufficient time to complete these tasks. Several issues should be addressed as the timeline is established:

- Will the work be done by a committee of the whole or in subcommittees? If subcommittees are used, more time is needed to allow them to organize and develop appropriate work plans.
- Will consultants be hired? Institutions of all types and sizes have successfully pursued disaster resistance on their own, but the process may be slower than if consultants are engaged.
- How many levels of planning will you engage in? Will departments, units, colleges, and divisions be involved in developing individual plans to integrate with the comprehensive effort? The amount of time planned should take into consideration the multiple levels of planning being considered.

Resources

During the first meeting and periodically thereafter, you may want to watch a short video or conduct a "what if" exercise to find out what campus locations or assets may be vulnerable to hazards. You can obtain information on conducting tabletop mitigation exercises and a list of relevant videos on the FEMA Web site or from the FEMA publications warehouse 1-800-480-2520.

Regardless of the answers to these questions, the timeline should expressly detail four events: 1) an informal kickoff, 2) the first formal meeting, 3) development of a mission statement, and 4) development of a communication plan.

Informal Kickoff. The first meeting of the advisory group will probably serve as the informal kickoff. This meeting should generate a sense of teamwork and focus on an introduction of the team members, the purpose of the meeting, and what the team wants to accomplish. The committee's charge should be delivered at this meeting and reviewed regularly throughout the process. The kickoff meeting is an ideal time to publicize the institution's efforts both on and off campus. The inclusion of community stakeholders should be explicitly recognized.

First Formal Meeting. The next important event on the initial timeline is the first formal meeting. The project manager should develop an agenda for the first meeting that includes a review of the charge and how the advisory committee members were selected. Prior to the first meeting, committee members should be designated to fill three vital roles: the chair, a facilitator, and someone to record all of the information. The first meeting should include a brief presentation on recent disasters that have affected the area. The issue of inclusiveness should be addressed and potential stakeholders who were not invited to join should be identified.

Experience

The University of Washington Disaster-resistant University Initiative adopted the following mission statement: "To fulfill the University's mission and commitments in the event of a disaster, the University strives to become disaster-resistant. Disaster resistance is achieved through recognition and analysis of the risks and analysis of natural and man-made hazards, mitigation of the human and economic impact of disasters, and comprehensive planning for resumption of University functions."

Develop a Mission Statement

Perhaps the most important objective of the first meeting is the development of a mission statement to help committee members understand what outcomes they want to achieve. This step can help build a common understanding of the mitigation plan's purpose.

Develop a Communication Plan

It is important early on to decide how and when information *about* the planning process, and information gleaned *from* the process, are disseminated, and to whom. University administrators, faculty, students, parents, and community officials will all take an interest in both the planning progress and the result of the process itself. Knowing when and what type of information will emerge also builds support for the process.

CONCLUSION

Once the initial inventory of resources is complete and stakeholders have been identified, the advisory committee formed, project manager determined, and timeline established, you are ready to move onto the Phase 2—the completion of a comprehensive hazard identification and risk assessment. At this point, the effort transitions from planning to completing a thorough assessment of the hazards the campus faces, the risks they pose, and the institution's vulnerability to those risks.