

## **Chapter 1**

# **Introduction to Crisis, Disaster, and Risk Management Concepts**

### **Introduction**

Emergency management is most simply defined as the discipline dealing with risk and risk avoidance. Risk represents a broad range of issues and includes an equally diverse set of players. The range of situations and events that could potentially involve emergency management or the emergency management system is extensive. It is undeniable that emergency management is integral to the security of our daily lives, and as such it should be integrated into our daily decisions rather than being called upon only in response to major disasters.

Emergency management is an essential role of government. The Constitution tasks the States with responsibility for public health and safety – hence they are responsible for public risks. The Federal government assumes a secondary role. The Federal Government’s ultimate obligation is to help when State, local or individual entities are overwhelmed. Despite significant changes to emergency management that have occurred in response to the September 11<sup>th</sup>, 2001 terrorist attacks, this fundamental philosophy continues to guide the government function of emergency management.

Based on this strong foundation, the validity of emergency management as a government function has never fallen into question. Entities and organizations fulfilling emergency management needs have existed at the State and local level since long before the Federal government became involved. But through time, as political philosophies changed and as the Nation developed, the Federal Government role in emergency management has steadily increased to become the multi-billion dollar program that exists today.

The purpose of this chapter is to introduce the reader to current and historical crisis, disaster and risk management concepts, to define the four phases of emergency management, and to highlight issues concerning communications, business continuity planning and international disaster programs. Also included in this chapter is a discussion of the attributes of a successful emergency management system that will be illustrated in the case studies presented in this book.

This chapter includes the following sections:

- Review of Historical Trends in Emergency Management

- Four Phases of Emergency Management
- Communications
- Business Continuity Planning and Emergency Management
- International Disaster Programs
- Emergency Management and the New Terrorism Threat
- Attributes of Successful Emergency Management Programs and Functions
- Brief Descriptions of Case Studies

## **Review of Historical Trends in Emergency Management**

### **Early History – 1800-1950**

In 1803, a Congressional Act was passed to provide financial assistance to a New Hampshire town devastated by fire. This is the first example of Federal government involvement in a local disaster.

During the 1930's the Reconstruction Finance Corporation and the Bureau of Public Roads were both given authority to make disaster loans available for repair and reconstruction of certain public facilities after disasters. The Tennessee Valley Authority (TVA) was created during this time to produce hydroelectric power and, as a secondary purpose, to reduce flooding in the region.

During this period, a significant piece of emergency management legislation was passed by Congress. The Flood Control Act of 1934 gave the U.S. Army Corps of Engineers increased authority to design and build flood control projects.

### **The Cold War and the Rise of Civil Defense – 1950s**

The next notable era in the evolution of emergency management took place during the 1950's. The Cold War years presented as the principal disaster risk the potential for nuclear war and its subsequent radioactive fallout. Civil Defense programs proliferated across communities during this time.

Almost every American community maintained a civil defense director, and most States had an official who represented civil defense in the State government hierarchy. By profession, these individuals were primarily retired military personnel, and their operations received little political or financial support from their State or local governments.

Federal support for these civil defense activities was vested in the Federal Civil Defense Administration (FCDA), an organization with minimal staff and financial resources, and whose main role was to provide technical assistance. However, the State and local civil defense directors became the first recognized face of emergency management in the U.S.

A companion office to the FCDA, the Office of Defense Mobilization, was established under the Department of Defense (DOD). The primary functions of this Office were to allow for quick mobilization of assets and materials and the production and stockpiling of critical materials in the event of a war. FCDA operations included a function called emergency preparedness. In 1958, these two offices were merged into the Office of Civil and Defense Mobilization.

The 1950's decade was a quiet period in regards to large-scale natural disasters, though three major hurricanes did strike with considerable impact. Hurricane Hazel, a Category 4 hurricane, inflicted significant damage in Virginia and North Carolina in 1954, Hurricane Diane hit several Mid-Atlantic and Northeastern states in 1955, and Hurricane Audrey, the most damaging of the three storms, struck Louisiana and North Texas in 1957. Congressional response to these disasters followed a familiar pattern of ad hoc legislation to provide increased disaster assistance funds to the impacted areas.

As the 1960's began, three major natural disaster events occurred. In 1960 in a sparsely populated area of Montana, the Hebgen Lake Earthquake (measuring 7.3 on the Richter scale) brought attention to the fact that the Nation's seismic risk extended far beyond the California borders. Also in that same year, Hurricane Donna struck the West coast of Florida, followed by Hurricane Carla which blew into Texas in 1961. The incoming Kennedy Administration decided to change the Federal approach to disasters and emergency management. In 1961, President John F. Kennedy created the Office of Emergency Preparedness inside the White House to handle the growing risk of natural disasters. Civil Defense responsibilities, however, remained in the Office of Civil Defense within DOD.

### **Changes to Emergency Management – 1960s**

As the 1960's progressed, the United States was affected by a series of major natural disasters. The Ash Wednesday Storm in 1962 devastated over 620 miles of shoreline on the East Coast, producing over \$300 million in damages. Then, in 1964, an destructive earthquake in Alaska's Prince William Sound that measured 9.2 on the Richter scale generated tsunamis that affected beaches as far down the Pacific Coast as California and killed 123 people – the event garnered front-page newspaper headlines throughout America and the world. Hurricane Betsy (1965) and Hurricane Camille (1969) were both significant in regards to their force and fury, killing and injuring hundreds of people and causing hundreds of millions of dollars in damage along the Gulf Coast.

As with previous disasters, the response to each of these events was the passage of ad hoc legislation for disaster relief funds. However, the financial losses resulting from Hurricane Betsy's path across Florida and Louisiana initiated the discussion of insurance as a protection against future floods and a potential method to reduce continual government assistance after disasters. Congressional interest was prompted by the unavailability of flood protection insurance on the standard homeowner policy. Such protection was in fact available in some areas, but it was prohibitively expensive and

therefore rarely purchased. These discussions ultimately led to passage of the National Flood Insurance Act of 1968 that created the National Flood Insurance Program (NFIP).

### **The Call for a National Focus to Emergency Management – 1970s**

In the 1970's, responsibility for various emergency management functions were evident in more than five Federal Departments and Agencies, including the Department of Commerce (weather, warning and fire protection); the General Services Administration (continuity of government, stockpiling, federal preparedness), the Treasury Department (import investigation), the Nuclear Regulatory Commission (power plants) and the Department of Housing and Urban Development (flood insurance and disaster relief). Within the military, there existed the Defense Civil Preparedness Agency (nuclear attack) and the U.S. Army Corps of Engineers (flood control). Overall, however, when one looked at the broad range of risks and potential disasters it became apparent that more than 100 federal agencies were involved in some aspect of risk and disaster management.

With passage of the Disaster Relief Act of 1974, prompted by the previously mentioned hurricanes and the San Fernando earthquake of 1971, the Department of Housing and Urban Development (HUD) possessed the most significant authority for natural disaster response and recovery. This existed through the National Flood Insurance Program (NFIP) under the Federal Insurance Administration (FIA) and the Federal Disaster Assistance Administration (disaster response, temporary housing and assistance).

The scattered pattern of placement of disaster management functions extended down to the State and, to a lesser extent, local levels. There were parallel organizations and programs that added to confusion and turf wars especially during disaster response efforts. The State governments and the Governors grew increasingly frustrated over this fragmentation. In response to the absence of a unified and effective Federal lead agency in emergency management, a group of State Civil Defense Directors led by Lacy Suiter of Tennessee and Erie Jones of Illinois launched an effort through the National Governor's Association to consolidate Federal emergency management activities into a single agency.

In the midst of these discussions, the accident at the Three Mile Island Nuclear Power Plant in Pennsylvania occurred, which added impetus to the ongoing consolidation effort. This event centered national media attention on the lack of adequate off-site preparedness around commercial nuclear power plants, and highlighted the role of the Federal government in responding to such an event.

On June 19, 1978, President Carter transmitted to the Congress, the Reorganization Plan Number 3 (3 CFR 1978, 5 U.S. Code 903). The stated and achieved intent of this plan was to consolidate emergency preparedness, mitigation, and response activities into one federal emergency management organization. The President proclaimed that the plan would provide for the establishment of the Federal Emergency Management Agency (FEMA) and that the FEMA Director would report directly to the President.

Reorganization Plan No.3 transferred the following agencies or functions to FEMA: National Fire Prevention Control Administration (Department of Commerce); Federal Insurance Administration (HUD); Federal Broadcast System (Executive Office of the President); Defense Civil Preparedness Agency (DOD); Federal Disaster Assistance Administration (HUD); and the Federal Preparedness Agency (GSA).

Additional transfers of emergency preparedness and mitigation functions to FEMA were: Oversight of the Earthquake Hazards Reduction Program (Office of Science and Technology Policy); coordination of dam safety (Office of Science and Technology Policy); assistance to communities in the development of readiness plans for severe weather related emergencies; coordination of natural and nuclear disaster warning systems; and coordination of preparedness and planning to reduce the consequences of major terrorist incidents.

### **Civil Defense Reappears as Nuclear Attack Planning – 1980s**

The early and mid-1980's presented FEMA with many challenges, though no significant natural disasters occurred. The absence of the need for a coherent Federal response to disasters, as was called for by Congress when it approved the establishment of FEMA, allowed FEMA to exist and operate as an organization composed of many separate parts.

In 1982, President Reagan appointed General Louis O. Guiffrida as Director of FEMA. Mr. Guiffrida, a Californian and close friend of Presidential advisor Ed Meese, had a background in terrorism preparedness and training at the State government level.

General Guiffrida proceeded to reorganize FEMA consistent with Administration policies and his background; top priority was placed on government preparedness for a nuclear attack. Resources within the Agency were realigned and additional budget authority was sought to enhance and elevate the National Security responsibilities of the Agency. With no real role for the States in these National Security activities, the State Directors who had lobbied for the creation of FEMA saw their authority and Federal funding declining.

During Guiffrida's tenure FEMA faced several unusual challenges that stretched its authority. This included asserting FEMA into the lead role for continuity of civilian government in the aftermath of a nuclear attack, managing the Federal response to the contamination at Love Canal and Times Beach, Missouri, and the Cuban refugee crisis. Although Guiffrida managed to bring the Agency physically together in a new Headquarters Building in Southwest Washington, severe morale problems persisted.

Dislike of Guiffrida's style and questions about the Agency's operations came to the attention of U.S. Representative Al Gore of Tennessee who then served on the House Science and Technology Committee. As the Congressional hearings proceeded, the Department of Justice and a grand jury began investigations of senior political officials at FEMA. These inquiries led to the resignation of Guiffrida and top aides in response to a variety of charges including misuse of government funds.

President Reagan then selected General Julius Becton to be director of FEMA. General Becton was a retired military General and had been the Director of the Office of Foreign Disaster Assistance in the State Department.

General Becton is uniformly credited with restoring integrity to the operations and appropriations of the Agency. From a policy standpoint, he continued to emphasize the programs of his predecessor but in a less visible manner. Becton himself expanded the duties of FEMA when he was asked by DOD to take over the program dealing with the off-site cleanup of chemical stockpiles on DOD bases. This program was fraught with problems and bad feelings existed between the communities and the bases over the funds available to the communities for the cleanup. FEMA had minimal technical expertise to administer this program and was dependent on DOD/Army for the funding. This situation led to political problems for the Agency and prevented significant advancements in local emergency management operations (as had been promised by DOD).

During his tenure, General Becton ranked the programs in the FEMA by level of importance. Of over 20 major programs that were listed, the earthquake, hurricane and flood programs ranked near the bottom. In reaction to the absence of any significant natural hazards during the immediately preceding years, such a ranking did not come as a surprise. This fact is also noteworthy in the context that it continued the pattern of isolating resources for National Security priorities without recognizing the potential for a major natural disaster.

This issue was raised, again by then Senator Al Gore, in hearings on FEMA's responsibilities as lead Agency for the National Earthquake Hazards Reduction Program (NEHRP). Senator Gore, reacting to a scientific report that said there could be up to 200,000 casualties from an earthquake occurring on the New Madrid fault, felt FEMA's priorities were misplaced. The legislation that created the NEHRP called on FEMA to develop a plan for how the Federal government would respond to a catastrophic earthquake. This Federal Response Plan would later become the operating Bible for all of the Federal agencies response operations. Senator Gore concluded that FEMA needed to spend more time working with its Federal, State and local partners on natural hazards planning.

As Congress debated, and finally passed, major reform of federal disaster policy as part of the Stewart McKinney-Robert Stafford Act, the promise of FEMA and its ability to support a national emergency management system remained in doubt.

At the closing of the 1980's, FEMA was an Agency in trouble. It suffered from severe morale problems, disparate leadership, and conflicts over Agency spending and priorities with its partners at the State and local levels. In 1989, the occurrence of two devastating natural disasters called into question the continued existence of FEMA.

In September of 1989, Hurricane Hugo slammed into North Carolina and South Carolina, after first inflicting damage in both Puerto Rico and the Virgin Islands. It was the worst hurricane in a decade with over \$15 billion in damages and 85 deaths. FEMA was slow

to respond, having waited for the events to occur and for the Governors to decide what to do. South Carolina Senator Ernest Hollings personally called the FEMA Director and asked for help, but the Agency did so at a very slow pace. Hollings responded by appearing on national television to berate FEMA in a most colorful way, calling the Agency the “sorriest bunch of bureaucratic jackasses”.

Less than a month later, the Bay Area of California was rocked by the Loma Prieta Earthquake as the 1989 World Series got underway in Oakland Stadium. The response was equally slow and, likewise, criticized.

In August 1992, within months of each other, Hurricane Andrew struck Florida and Louisiana and Hurricane Iniki struck Hawaii . FEMA was clearly unprepared, as were FEMA’s partners at the State level. The Agency’s failure to respond was witnessed by Americans across the entire country as major news organizations documented the crisis. The efficacy of FEMA as the national emergency response agency was clearly in doubt. President Bush dispatched then Secretary of Transportation, Andrew Card to take over the response operation, which was tasked to the military.

### **All-Hazards Approach - 1990s**

When President Clinton nominated James Lee Witt as the Director of FEMA, he breathed life back into FEMA and brought a much-needed new leadership style to the troubled Agency. Witt was the first Director of FEMA with actual emergency management experience. He had come from the constituency who had played a major role in creating FEMA but had been forgotten; the State Directors. With Witt, President Clinton had given FEMA increased credibility and more importantly, a skilled politician who knew the importance of building partnerships and serving one’s customers.

Witt’s leadership and the changes he made were quickly tested, as the Nation experienced an unprecedented series of natural disasters during his years at the Agency. The Midwest Floods in 1993 resulted in major disaster declarations in nine States. These floods, and their expansive and devastating consequences, called into question the value of some of the flood control measures initiated long ago as part of the 1930’s Corps of Engineers’ legislation. FEMA’s successful response to the event, however, brought about the opportunity to change the focus of emergency management from post disaster recovery to pre-disaster mitigation. Such a shift was initiated through the creation of the largest voluntary buy out and relocation program to date, which sought simply to move people out of the floodplain and thus, out of harm’s way.

The Northridge (CA) Earthquake of 1994 quickly followed the Midwest Floods. This event tested all of FEMA’s newly streamlined approaches and their advancements in service delivery technology (and even led to the creation of new policies and technologies). The Federal response to this event was hailed as an overall success.

When President Clinton elevated Witt as Director of FEMA to be a member of his Cabinet, the value and importance of emergency management was recognized. Witt used

this as an opportunity to lobby the Nation's Governors to include their state emergency management directors in their Cabinets.

The Oklahoma City Bombing in April 1995 represented a new phase in the evolution of emergency management in the United States. This event, which followed the less destructive first bombing of the World Trade Center in New York City in 1992, elevated the issue of the nation's preparedness for terrorism events. As emergency management responsibilities were (and still are) defined by recognized risks and the consequences of those risks, responding to terrorist threats were included in FEMA's domain. The Oklahoma City bombing tested this thesis and set the stage for inter-agency disagreements over which Agency would be in charge of terrorism.

The Nunn-Lugar legislation of 1995 opened the question of who would be the lead agency in terrorism. Many fault FEMA executives for not quickly claiming that leadership role. As such, the late 1990's were marked by several different agencies and departments asserting their individual roles in terrorism planning. The question of who would be the first responder to a terrorism incident - fire, police, emergency management or emergency medical services - was closely examined without any clear answers resulting. The State Directors were looking for FEMA to claim this leadership role, but the leadership of FEMA vacillated on this issue in an uncharacteristic way. Terrorism was certainly part of the all-hazards approach to emergency management championed by FEMA, but the resources and technologies needed to address specific issues such as a chemical, biological, and other weapons of mass destruction events seemed well beyond the reach of the current emergency management structure.

While this debate continued, FEMA took an important step in its commitment to disaster mitigation by launching a national initiative to promote a new community-based approach called Project Impact. Project Impact: Building Disaster Resistant Communities was designed to mainstream emergency management and mitigation practices into every American community. The project sought to reach back to the roots of emergency management, asking communities to identify their risks and establish plans to reduce those risks. It tasked communities with establishing partnerships that would include all the communities' stakeholders including, for the first time, the business sector.

The ultimate goal of the Project Impact concept was to incorporate decisions about risk and risk avoidance into the community's everyday decision-making processes. By building a disaster resistant community, the community would promote sustainable economic development, protect and enhance its natural resources, and ensure a better quality of life for its citizens. Project Impact had ambitious goals and was well received by the communities and by Congress. It was designed to create a broader constituency - a grass roots campaign - for emergency management issues.

As the decade ended, absent of any of the predicted major technological glitches expected from the well-publicized 'Y2K bug', FEMA was recognized as the preeminent emergency management system in the world. It was emulated in several countries

throughout the world, and Witt became America's Ambassador for emergency management overseas.

Hurricane Mitch, which devastated many areas in Central America and the Caribbean, brought about a change in American foreign policy towards promoting and supporting community-based mitigation projects. State and local emergency management programs had grown and their value was recognized and supported by society. Private sector and business continuity programs were flourishing.

The role and responsibility and the partnerships supporting emergency management had significantly increased, and its budget and stature had grown significantly. Sound emergency management practice became integral to both economic and environmental issues; it became a staple of discussion relative to a community's quality of life.

The profession of emergency management was attracting a different type of individual. Political and management skills were recognized as critical to the position, and candidates for State, local and private emergency management positions were now being judged on their training and experience rather than their relationship to the community's political leadership.

Undergraduate and advance degree programs in emergency management were flourishing at over 65 national colleges and universities. The profession had become well-respected and challenging, and was quickly becoming competitive for prospective employees.

### **Terrorism Becomes Major Focus - 2001**

With the election of George W. Bush, a new FEMA Director was named to head the Agency; Joe Allbaugh. As a former the Chief of Staff to Governor Bush in Texas and President Bush's Campaign Manager in the 2000 Presidential race, Allbaugh had a close personal relationship with the President. As demonstrated by Director Witt under President Clinton, this relationship was recognized as positive for the Agency. His lack of emergency management background, however, was not an issue that was raised during his confirmation hearings.

As part of a major reorganization of the Agency, Allbaugh recreated the Office of National Preparedness (ONP), which was first established in the 1980s during the Guiffrida reign to plan for World War III (but had been eliminated by Witt in 1992.) The office was recreated with a new mission, to focus on terrorism. Allbaugh's action raised some concerns among FEMA's constituents and FEMA staff.

In a September 10, 2001 speech, Director Allbaugh talked about his priorities as being firefighters, disaster mitigation and catastrophic preparedness. Today, this speech seems prophetic in light of the events of September 11<sup>th</sup>. As the events of that terrible day unfolded, FEMA activated the Federal Response Plan, setting forth response operations as they were designed in both New York and in Virginia. Most of the Agency's senior leaders, including the Director, had been in Montana at the time, attending the Annual

Meeting of the National Emergency Management Association (NEMA – an organization that represents State Emergency Management Directors.) The strength of the American emergency response system was proven effective by the rapid and effective activation of hundreds of Federal response personnel.

### **The Future - 2002 and Beyond**

On November 25<sup>th</sup> of 2002, President Bush signed into law the Homeland Security Act of 2002, and announced that former Pennsylvania Governor Tom Ridge would be Secretary of a new Department of Homeland Security (DHS). This act, which authorized the greatest federal government reorganization since President Harry Truman joined the various branches of the armed forces under the Department of Defense, is charged with a three-fold mission of protecting the United States from further terrorist attacks, reducing the nation's vulnerability to terrorism, and minimizing the damage from potential terrorist attacks and natural disasters.

A sweeping reorganization into the new Department, which officially opened its doors on January 24<sup>th</sup> of 2003, joined together over 179,000 federal employees from twenty-two existing federal agencies under the umbrella of a single, Cabinet-level organization.

The creation of DHS was the culmination of an evolutionary legislative process that began largely in response to criticism that increased federal intelligence inter-agency cooperation could have prevented the September 11<sup>th</sup> terrorist attacks. Just nine days following those attacks, President Bush created the Office of Homeland Security (by Executive Order), with Tom Ridge as Director, but the small office became widely viewed as ineffective.

The White House and Congress recognized that a Homeland Security czar would require both a staff and a large budget in order to succeed, and thus began deliberations to create a new Cabinet-level Department that would fuse many of the security-related agencies dispersed throughout the federal government. For several months during the second-half of 2002, Congress jockeyed between different versions of the Homeland Security bill in an effort to establish legislation that was passable yet effective.

Lawmakers were particularly mired on the issue of the rights of employees. Furthermore, the White House ultimately failed in their attempt to incorporate many of the intelligence-gathering and investigative law enforcement agencies, namely the National Security Agency (NSA), the Federal Bureau of Investigation (FBI), and the Central Intelligence Agency (CIA). Despite these delays and setbacks, the Republican seats gained in both the House and Senate gave the President the leverage he needed to pass the bill without further deliberation.

Beginning March 1<sup>st</sup> of 2003, almost all of the federal agencies (and their respective employees) named in the act began their move, whether literally or symbolically, into the new Department. Those remaining followed later that year, with all incidental transfers completed by September 1<sup>st</sup>. While a handful of these agencies remained intact after the

move, most were incorporated into one of four new directorates; Border and Transportation Security (BTS), Information Analysis and Infrastructure Protection (IAIP), Emergency Preparedness and Response (EP&R), and Science and Technology (S&T). A fifth directorate, Management, did not incorporate any existing federal agencies. FEMA was moved into, and essentially composed, the Emergency Preparedness and Response Directorate. Assistant Director of FEMA Michael Brown became the DHS Assistant Secretary for Emergency Preparedness and Response.

On January 24<sup>th</sup> of 2003, Tom Ridge and a small initial staff commenced work at the Nebraska Avenue Center (NAC) headquarters, a facility shared with the US Navy in Northwest Washington, DC (that had previously been used by the Office of Homeland Security.) Eight days later, when the Space Shuttle Challenger tragically exploded over Texas, the Department was tasked with its first disaster response. One week later, in reaction to information gathered by intelligence agencies, President Bush raised the color-coded Homeland Security Advisory System index from yellow (elevated) to orange (high). However, it was not until a series of hurricanes struck in late 2004 that the true effectiveness of DHS, in its emergency management role, was tested. While the response mechanism surely worked as it had been designed to do, the recovery operations will likely extend for years owing to the massive damage that was incurred.

## **Four Phases of Emergency Management**

In this section, the four phases of emergency management will be defined: mitigation, preparedness, response and recovery.

### **Mitigation**

Over the last decade the social and economic costs of disasters to the United States, and throughout the World have grown significantly. During the 1990's, FEMA spent over \$25.4 billion to provide disaster assistance in the United States. During that decade, the economic toll of natural disasters, world wide, topped \$608 billion. This amounted to more than the previous four decades combined. The causes of this increase in disaster consequences are myriad. Climatological changes such as El Nino, global warming and sea level rise have all been identified as contributors. Add to this the many societal impacts such as increased development in and migration to identified risk zones, deforestation and clear cutting, and filling in of floodplains, among many other factors, and the picture becomes more clear.

The discipline of mitigation provides the means for reducing these impacts. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects.

The function of mitigation differs from the other emergency management disciplines in that it looks at long-term solutions to reducing risk as opposed to merely accepting that they will happen and preparing for their consequences, responding to their consequences, or recovering from them. Mitigation is usually not considered part of the emergency

phase of a disaster as in response, or as part of emergency planning as in preparedness, or following the disaster as with recovery. Mitigation can be performed during each or all of these phases.

Another significant difference sets mitigation apart from the other disciplines of emergency management. Implementing mitigation programs and activities requires the participation and support of a broad spectrum of players outside of the traditional emergency management circle. Mitigation involves, among other public and private sector participants, land use planners, construction and building officials, business owners, insurance companies, community leaders and politicians.

The skills and tools for accomplishing mitigation (planning expertise, political acumen, marketing and public relations and consensus building, among others) are different than the operational, first responder skills which more traditionally characterize emergency management professionals. In fact, historically, the emergency management professional has been reluctant in taking a lead role in promoting mitigation because of its appearing to fall outside of this scope of activities. A State Director of emergency management once said words to the effect... 'I will never lose my job for failing to do mitigation, but I could lose my job if I mess up a response.'

With the exception of the fire community, who lead early on in the effort to mitigate fire risks through their support for building codes, code enforcement and public education, the emergency management community has remained focused on response and recovery obligations.

However, these trends are changing for several key reasons. Leadership at the Federal level, larger disasters, substantial increases in funding, and more value and professionalism in emergency management, have all resulted in greater acknowledgement of the importance of mitigation.

## **Preparedness**

Preparedness within the field of emergency management can best be defined as a state of readiness to respond to a disaster, crisis or any other type of emergency situation.

Preparedness is not, however, only a state of readiness, but also a constant theme throughout most aspects of emergency management. If one looks back into the history of the Nation, they will see the predecessors of today's emergency managers focusing most heavily upon preparedness activities. For example, the fall-out shelters of the 1950's and the air raid wardens were promoted as preparedness for a potential nuclear attack from the Soviet Union. Again, in the 1970's, an acclaimed study prepared by the National Governor's Association proclaimed emergency preparedness as the first step in emergency management.

After the Three Mile Island Nuclear Power Plant incident occurred in 1979, preparedness around commercial nuclear power plants became a major issue for continued licensing of

these plants. The increased emphasis on preparing the public for a potential event through planning and education, and preparing local responders through required exercises caused a likewise increased focus on overall preparedness for disasters. Also because of the recognized potential for subsequent nuclear disasters, the Nuclear Regulatory Commission's licensing requirements required local emergency plans, exercise of those plans and evaluation of the exercises.

This process had a profound impact on the discipline of emergency management. The off-site preparedness planning process became the model for future emergency response plans. The required exercises are seen as being the first such activities taken on a widespread scale. They also brought a legitimacy and level of public and political exposure to the emergency management profession. Most people agree that the radiological emergency preparedness program, initiated in the aftermath of Three Mile Island and which became part of the newly created FEMA, was the start of the modern emergency management discipline.

Since that era, preparedness has advanced significantly and its role as a building block of emergency management continues. No emergency management organization can function without a strong preparedness capacity. This capability is built through planning, training and exercising, and has led to an increased professionalism within the discipline of emergency management. Throughout the 1990's FEMA was focused on supporting and enhancing these efforts, not just at the Federal level but throughout government and into the private sector.

All organizations in private, public and government sectors are susceptible to the consequences of a disaster and must consider preparedness. Preparedness not only focuses on getting essential government services, such as utilities and emergency services functioning at pre-disaster levels, but assisting businesses in quickly reopening to the public. Both of these key functions of preparedness help to minimize the required time for the effected population to return to pre-disaster life.

Business contingency planning, the effort of private businesses to ensure that business activities continue in the aftermath of disaster, has emerged as a profitable off shoot of government preparedness efforts.

## **Response**

When a disaster event such as a flood, earthquake or hurricane occurs, the first responders to this event are always local police, fire and emergency medical personnel. Their job is to rescue and attend to those injured, suppress fires, secure and police the disaster area and to begin the process of restoring order. They are supported in this effort by local emergency management personnel and community government officials.

If the size of the disaster event is so large that the capabilities of local responders are overwhelmed and the costs of the damage inflicted exceeds the capacity of the local government, the Mayor or County Executive will turn to the Governor and State

Government for assistance in responding to the event and in helping the community to recover. The Governor will turn to the State's emergency management agency and possibly the State National Guard and other State resources to provide this assistance to the stricken community.

Should the Governor decide, based on information generated by community and State officials, that the size of the disaster event exceeds the State's capacity to respond, the Governor will make a formal request to the President for a Presidential major disaster declaration. This request is prepared by State officials in cooperation with regional staff from FEMA (with DHS). The Governor's request is analyzed first by the FEMA Regional Office and then forwarded to FEMA headquarters in Washington, DC. FEMA headquarters staff review and evaluate the Governor's request and forward their analysis and recommendation to the President. The President considers FEMA's recommendation and then makes a decision to grant the declaration or to turn it down.

If the President grants a major disaster declaration, FEMA activates the National Response Plan (NRP) and proceeds to direct several Federal Departments and Agencies, including the American Red Cross, in support of State and local efforts to respond to and recover from the disaster event. The Presidential declaration also makes available several disaster assistance programs in FEMA and other Federal agencies designed to assist individuals and communities to begin the process of rebuilding their homes, their community infrastructure and their lives.

When a major disaster strikes in the United States, the above chronology describes how the most sophisticated and advanced emergency management system in the world responds and begins the recovery process. This system is built on coordination and cooperation among a significant number of Federal, State and local government agencies, volunteer organizations and, more recently, the business community.

In the 1990's the emergency management system in the United States was tested repeatedly by major disaster events such as the 1993 Midwest floods, the 1994 Northridge earthquake and a series of devastating hurricanes and tornadoes. In each instance, the system worked to bring the full resources of the Federal, State and local governments to produce the most comprehensive and effective response possible. The system also leveraged the capabilities and resources of our nation's cadre of volunteer organizations to provide immediate food and shelter. In recent years, government officials and agencies at all levels have begun to reach out to the business community to both leverage their response capabilities and to work closer with them in the recovery effort.

The September 11 terrorist attacks have caused all levels of government to reevaluate response procedures and protocols. The unusual loss of so many first responders to this disaster event has resulted in numerous after action evaluations that will likely lead to changes in the procedures and protocols for first responders in the future. Additionally, the possibility of future terrorism attacks has focused attention to how best to protect first responders from harm in future attacks.

## **Recovery**

There is often a theoretical debate over when the response function ends and the recovery function begins. For our purposes we will classify the response function as the immediate actions to save lives, protect property, and meet basic human needs. The recovery function is not so easily classified. This function often begins in the initial hours and days following a disaster event and can continue for months and in some cases years, depending on the severity of the event.

Unlike the response function, where all efforts have a singular focus, the recovery function or process is characterized by a complex set of issues and decisions that must be made by individuals and communities. Recovery involves decisions and actions relative to rebuilding homes, replacing property, resuming employment, restoring businesses, and permanently repairing and rebuilding infrastructure. The recovery process requires balancing the more immediate need to return the community to normalcy with the longer term goal of reducing future vulnerability. The recovery process can provide individuals and communities with opportunities to become more economically secure and improve the overall safety and quality of life.

Because the recovery function has such long lasting impacts and (generally) high costs, the participants in the process are numerous. They include all levels of government, the business community, political leadership, community activists, and individuals. Each of these groups plays a role in determining how the recovery will progress. Some of these roles are regulatory, such as application of State or local building ordinances, and some, such as the insurance industry, provide financial support. The goal of an effective recovery is to bring all of the players together to plan, finance and implement a recovery strategy that will rebuild the disaster impacted area safer and more secure as quickly as possible.

The precipitating event for an area impacted by a disaster is the Presidential declaration of disaster under the Stafford Act. Recovery activities begin immediately after a Presidential declaration as the agencies of the Federal Government collaborate with the State in the impacted area in coordinating the implementation of recovery programs and the delivery of recovery services.

## **Communications**

Communications has become an increasingly critical function in emergency management. The dissemination of timely and accurate information to the general public, elected and community officials, and the media plays a major role in the effective management of disaster response and recovery activities. Communicating preparedness, prevention and mitigation information promotes actions that reduce the risk of future disasters. Communicating policies, goals and priorities to staff, partners and participants enhances support and promotes a more efficient disaster management operation. In communicating

with the public, establishing a partnership with the media is key to implementing a successful strategy.

The mission of an effective disaster communications strategy is to provide timely and accurate information to the public in all four phases of emergency management: mitigation, preparedness, response and recovery. The goals of communications in each phase is as follows:

- Mitigation – to promote implementation of strategies, technologies and actions that will reduce the loss of lives and property in future disasters.
- Preparedness – to communicate preparedness messages that encourages and educates the public in anticipation of disaster events.
- Response – to provide to the public notification, warning, evacuation and situation reports on an ongoing disaster.
- Recovery – to provide individuals and communities impacted by a disaster with information on how to register for and receive disaster relief.

The foundation of an effective disaster communications strategy is built on the four critical assumptions:

- Customer Focus
- Leadership Commitment
- Inclusion of Communications in Planning and Operations
- Media Partnership

### **Customer Focus**

An essential element of any effective emergency management system is a focus on customers and customer service. This philosophy should guide our communications with the public and with all partners in emergency management. A customer service approach includes placing the needs and interests of individuals and communities first, being responsive and informative, and managing expectations.

The customers for emergency management are diverse. They include internal customers, such as staff, other Federal agencies, States, and other disaster partners. External customers include the general public, elected officials at all levels of government, community and business leaders and the media. Each of these customers has special needs and a good communications strategy considers and reflects their requirements.

### **Leadership Commitment**

Good communications starts with a commitment by the leadership of the emergency management organization to sharing and disseminating information both internally and externally. The director of any emergency management organization must openly endorse and promote open lines of communications among the organization's staff, partners and publics in order to effectively communicate. This leader must model this

behavior in order to clearly illustrate that communications is valued function of the organization.

### **Inclusion of Communications in Planning and Operations**

The most important part of leadership's commitment to communications is inclusion of communications in all planning and operations. This means that a communications specialist is included in the senior management team of the emergency management organization. It means that communications issues are considered in the decision-making processes and that a communications element is included in all organizational activities, plans and operations.

In the past, communicating with external audiences, or customers, and in many cases internal customers, was not valued nor considered critical to a successful emergency management operation. Technology has changed the equation. In today's world of 24-hour television and radio news and the Internet, the demand for information is never-ending; most notably in an emergency response situation. Emergency managers must be able to communicate critical information in a timely manner to their staff, partners, the public and the media.

To do so, the information needs of the various customers and how best to communicate with these customers must be considered at the same time that planning and operational decisions are being made. For example, a decision process on how to remove debris from a disaster area must include discussion of how to communicate information on the debris removal operation to community officials, the public and the media.

### **Media Partnership**

The media plays a primary role in communicating with the public. No government emergency management organization could ever hope to develop a communications network comparable to those networks already established and maintained by television, radio, and newspaper outlets across the country. To effectively provide timely disaster information to the public, emergency managers must establish a partnership with their local media outlets.

The goal of a media partnership is to provide accurate and timely information to the public in both disaster and non-disaster situations. The partnership requires a commitment by both the emergency manager and the media to work together and it requires a level of trust between both parties.

Traditionally, the relationship between emergency managers and the media has been tenuous. There has often been a conflict between the need of the emergency manager to respond quickly and the need of the media to obtain information on the response so it can report it just as quickly. This conflict sometimes resulted in inaccurate reporting and tension between the emergency manager and the media. The loser in this conflict is always the public, which relies on the media for information.

It is important for emergency managers to understand the needs of the media and the value they bring to facilitating response operations. An effective media partnership provides the emergency manager with a communications network to reach the public with vital information. Such a partnership provides the media with access to the disaster site, access to emergency managers and their staff and access to critical information for the public that informs and ensures the accuracy of their reporting.

An effective media partnership helps to define the roles of the emergency management organizations, to manage public expectations and to boost the morale of the relief workers and the disaster victims. All of these factors can speed the recovery of a community from a disaster event and promote preparedness and mitigation efforts designed to reduce the loss of life and property from the next disaster event.

## **Business Continuity Planning and Emergency Management**

Business continuity planning provides focus driven preparedness for businesses. At its simplest, business continuity planning (BCP) is the act of setting up a plan to ensure the very survival of an organization. Since the early concern with the restoration of computer data, the concept of continuity has evolved in response to a changing environment. Major events have demanded that BCP encompass a growing number of concerns. The severe consequences of September 11<sup>th</sup> have raised many implications as to how BCP will evolve in response to the disaster. How BCP evolves will directly influence business as a whole.

A major implication is that terrorism must be considered as a real threat to the survival of business. Second, BCP will expand to include a concern for the physical safety of employees. The third implication may involve the decentralization of business operations as central to BCP. Fourth, it may have to expand its sphere of concern to include the regional impacts of a disaster (including economic) to the area where a business is located. Fifth is a new concern for the human relationships that a business depends on for its survival. The sixth implication for BCP is a recovery time of zero. The seventh implication is the renewed importance of critical data back-up systems. The eighth is the inclusion of physical security concerns. The expansion of BCP to encompass more concerns leads to the ninth implication, which is the increased importance of and pressure on business continuity planners.

September 11<sup>th</sup> raised awareness of the fact that the survival of business depends on many external factors. External factors such as infrastructure and public safety authorities play a key role in whether or not BCP is ultimately successful. After September 11<sup>th</sup>, infrastructure vital to business has even come under the control of public safety authorities. In this case BCP is doubly dependent on public safety authorities. This awareness has led to attempts at greater communication between business and government since the attacks. Business is demanding interaction with government so that it can anticipate how to react in the event of not only terrorist attacks, but also any catastrophe that threaten its very survival. The attempt at greater communication and

interaction by business is a proactive effort to turn its reliance on public safety authorities into an opportunity to ensure the success of BCP.

This suggests that business will demand a more extensive role for emergency management in BCP. The connection between emergency management and BCP is natural as it is authority that has the responsibility of public safety planning. By demanding that emergency management play an extensive role in BCP, business can interact with government to ensure its survival. Emergency management should meet this demand with an outstretched arm because it represents a great opportunity for the field. If emergency management sincerely cooperates, then business may demand that government at all levels allocate more resources to emergency management in order to ensure that it can provide effective assistance. Ultimately, with business as its advocate, emergency management may gain the influence it needs to assume a greater role in leading the local and national public safety agenda.

## **International Disaster Management**

People of all nations face risks associated with the natural and technological hazards described throughout this book, and almost all eventually become victim to disaster. Throughout history, civilizations have adapted to their surroundings in the hopes of increasing the likelihood of survival. As societies became more organized, complex systems of response to these hazards were developed on local, national, and regional levels.

The capacity to respond achieved by individual nations can be linked to several factors, including propensity for disaster, local and regional economic resources, organization of government, and availability of technological, academic and human resources. However, it is becoming increasingly common that the response ability of individual nations is insufficient in the face of large-scale disaster, and outside assistance must be called upon. Disasters that affect whole regions are not uncommon, and require these same international response mechanisms.

## **Emergency Management and the New Terrorism Threat**

The focus of emergency management in the United States has evolved over time as new risks were identified and methods for dealing with these risks were developed. In the early part of the 20<sup>th</sup> century, ad hoc responses to catastrophic disasters and the implementation of large scale public works projects designed to reduce risks, such as the levee building projects of the U.S. Army Corps of Engineers, were the norm.

The advent of the Cold War in the 1950s resulted in the establishment Civil Defense programs around the country with their focus on preparing for nuclear war. A series of large scale disasters in the 1960s and 1970s focused the nation's Governors to prompt the Federal government to consolidate its emergency management functions into one agency and so FEMA was formed in 1979 with the mission of providing a single Federal entity to work with State and local governments to respond to disasters.

FEMA's mission changed almost instantly in the 1980s with its singular focus on nuclear attack planning. As a result, FEMA and the Federal government was not prepared nor equipped to respond to another series of large scale disaster in the late 1980s and early 1990s. FEMA's failures in Hurricane Hugo, Hurricane Iniki, the Loma Prieta earthquake and finally in Hurricane Andrew led to calls in Congress for its elimination.

The Clinton Administration responded by reorganizing the Agency and refocusing its efforts on an all-hazards approach. The new FEMA strengthened its partnerships with State and local emergency management officials and created new partnerships with the private sector. The response capabilities of the Federal government and FEMA's role as coordinating agency was enhanced and embodied in the Federal Response Plan. For the first time ever, FEMA established a Mitigation Directorate and further promoted hazard mitigation efforts at the community level through its nationwide initiative, Project Impact.

The terrorist attacks of September 11 prompted dramatic changes in emergency management in the United States. These attacks and the subsequent Anthrax scare in Washington, DC in October 2001 have been the impetus for a reexamination of the nation's emergency management system, its priorities, funding and practices. These changes are ongoing and will continue for the foreseeable future.

Prior to September 11, the Nunn-Lugar legislation provided the primary authority and focus for domestic Federal preparedness activities for terrorism. Several agencies - FEMA, Department of Justice (DOJ), Department of Health and Human Resources (HHS), DOD, and the National Guard - were all involved, and jockeying for leadership of the terrorism issue. There were some attempts at coordination but, in general, agencies pursued their own agendas. The biggest difference among the Agencies was the level of funding available, with DOD and DOJ controlling the most funds. State and local governments were confused, felt unprepared and complained of the need to recognize their vulnerability and needs should an event happen. The TOPOFF exercise held in 1999, reinforced these concerns and vividly demonstrated the problems that could arise in a real event.

The events of September 11, unfortunately, validated their concerns and visibly demonstrated the need for changes in the Federal approach to terrorism. The changes fall into five general categories including: first responder practices and protocols, preparing for terrorist acts, funding the war on terrorism, creation of the Department of Homeland Security, and the shift in focus of the nation's emergency management system to the war on terrorism.

In Fall 2002, the first wave of after action reports on the response to the events of September 11, 2001 at the World Trade Center in New York City, at the Pentagon in Virginia, and in Washington, D.C. were completed and made available to the emergency management community and the public. The principal focus of these after action reports is on the actions taken by first responders – fire, police and emergency medical

technicians – at the scene of the World Trade Center and the Pentagon. Not surprisingly, these reports identify some basic changes in the practices and protocols of first responders to future terrorist incidents designed to reduce the terrible toll taken on first responders at the World Trade Center. Most of these changes will be implemented at the local level.

There are five groups that must be fully engaged in the nation's war on terrorism: the diplomats, the intelligence community, the military, law enforcement and emergency management. The principal goal of the diplomats, intelligence, military and law enforcement is to reduce if not eliminate the possibility of future terrorist attacks on American citizens inside our borders and abroad.

The goal of emergency management should be to reduce the future impacts in terms of loss of life, injuries, property damage and economic disruption caused by the next terrorist attack; to be prepared for the next attack; and, to respond quickly and effectively when the next attack occurs. As President Bush and many of his advisors have repeatedly informed the nation, it is not a question of if but rather when the next terrorist attack occurs.

Therefore, it will be incumbent upon emergency managers to apply the same diligence to preparing for the next bombing or bio-chemical event as they do for the next hurricane or flood or tornado. The focus of emergency management in the war on terrorism must be on reducing the danger to first responders, to the public, the business community, the economy and our way of life from future terrorist attacks. This change must occur at all levels of the emergency management system: Federal, State and local.

The war on terrorism has resulted in unprecedented funding resources being made available to the emergency management community. For the first time, vast sums of money from the Federal government are available for first responder equipment and training, for planning and exercises and for the development of new technologies. Funding for FEMA has increased as has the amount of funds FEMA delivers to State and local emergency management organizations.

Historically, FEMA has distributed about \$175 million annually to its State and local emergency management partners. The Federal FY2003 budget contained \$3.5 billion for FEMA to distribute to States and local emergency management organizations. This is in addition to funding FEMA received in a supplemental funding bill passed by Congress after the September 11 attacks. New Federal funding sources are also opening up for emergency managers from the Department of Defense, the Department of Justice and the Department of Health and Human Services to fund contingency plans, technology assessment and development and bio-terror equipment and training. This change in funding for emergency management will be felt most significantly at the State and local levels.

The creation of the Department of Homeland Security (DHS) represents a landmark change for the Federal community, especially for emergency management. The

consolidation of all Federal agencies involved in fighting the war on terrorism follows the same logic that first established FEMA in 1979. At that time, then President Carter at the request and suggestion of the nation's Governors consolidated all the Federal agencies and programs involved in federal disaster relief, preparedness and mitigation into one single Federal agency, FEMA.

The Director of FEMA reported directly to the President as will the DHS Secretary. However, with FEMA absorbed into DHS, the FEMA director no longer reports directly to the President but rather to the DHS Secretary. This change could have had a significant impact on FEMA and its State and local partners in managing natural and other technological disasters in the future, but appears to have been managed by the importance placed upon the position of the Secretary of Homeland Security.

At the request of President George W. Bush, FEMA established the Office of National Preparedness in 2001 to focus attention on the then undeclared terrorist threat and other national security issues. This was the first step in the refocusing of FEMA's mission and attention from an all-hazards approach to emergency management embraced by the Clinton administration. The shift in focus was accelerated by the events of September 11 and has been embraced by State and local emergency management operations across the country.

A similar shift of focus in FEMA occurred in 1981 at the beginning of the Reagan Administration. Then the shift of focus was from disaster management to planning for a nuclear war. For the remaining years of the Reagan Administration and the four years of President George H. W. Bush's administration, FEMA resources and personnel focused their attention of ensuring continuity of government operations in the event of a nuclear attack. Little attention was paid to natural hazard management and FEMA was left unprepared to deal with a series of catastrophic natural disasters starting with Hurricane Hugo in 1989 and culminating with Hurricane Andrew in 1992.

If history repeats itself, the current change in focus away from the all-hazard approach of the 1990s could result in a weakening of FEMA's natural disaster management capabilities in the future.

## **Attributes of Successful Emergency Management Programs and Functions**

The purpose of this book is to provide a series of case studies that illustrate how the various aspects of emergency management function in the United States and abroad. Our hope that these case studies will be used to highlight those actions and activities that support a successful emergency management program or function.

Our focus is primarily on emergency management programs and activities in the United States. The U.S. has the most sophisticated and experienced emergency management system in the world and many of the case studies presented in this book are of programs and activities in this system. While other countries do not have the resources available in the United States to sustain such an emergency management system, the underlying

factors that have made the U.S. system successful can serve as the basis for the establishment or enhancement of emergency management systems in other countries, particularly developing nations, despite limited resources.

There are seven attributes found in a successful emergency management system or function:

- Customer Focus
- Statutory and Budget Authority
- Leadership
- Partnerships
- Communications
- Training, Tools and Technologies
- Focus on Mitigation and Reducing Future Impacts

### **Customer Focus**

The first and foremost attribute of a successful emergency management system or function is its focus on the needs of the customer. The most obvious customer of emergency management is the disaster victim. The disaster victim can be an individual, a business, a community or a nation.

Other customers include elected officials, community leaders, volunteer and non-governmental groups and the media. These groups are also considered stakeholders and partners. There are internal customers within every emergency management organization including fellow employees and staff in other offices in the organization.

Understanding the customer's needs in a time of crisis is critical to developing effective disaster programs and activities. FEMA surveys disaster victims and meets regularly with State and local emergency management officials in order to understand their customer's needs. This information is used to refine existing programs and develop new programs to meet the expressed needs of the customers. The timing and delivery of financial and technical assistance is driven by the customer's needs and schedule. Work functions are designed with the customer's needs in mind.

### **Statutory and Budget Authority**

Statutory authority is critical to any emergency management system. The Stafford Act in the United States clearly establishes the authority for FEMA operations. It establishes the agency's principal mitigation, preparedness, response and recovery programs and their eligibility requirements. It provides FEMA will the legal authority to function inside the Federal government and in partnership with State and local emergency management agencies.

The authority would be meaningless without the budget appropriation provided to FEMA annually by the U.S. Congress. The regular appropriation of funds ensures that FEMA can fund its programs and activities as well as reimburse its Federal, State and local partners for actions taken as part of the Federal Response Plan. Regular and consistent budget appropriations have ensured that FEMA programs and activities are conducted efficiently and effectively.

No emergency management system anywhere in the world can properly function without statutory authority and consistent budget appropriations. Both must be in place for the system to function properly. In many countries throughout the world, statutory authority for an emergency management system is in place but regular and consistent budget appropriations are not. A successful emergency management system cannot have one or the other; it must have both statutory authority and regular budget appropriations to sustain operational consistency.

### **Leadership**

Leadership is key to any successful government function and especially in emergency management. A strong leader clearly articulates the vision and mission of the organization, manages and trains the staff, provides the staff with the tools needed to be successful and represents the organization and its programs and activities to the public, the political leadership and the media. FEMA's success in the 1990s can be attributed to the leadership of its Director, James Lee Witt.

FEMA's success must also be attributed to the support and leadership provided by President Bill Clinton. President Clinton valued the role of emergency management in government and in helping citizens deal with disasters. Support and leadership from the highest level of government at every level, Federal, State or local, is critical to the success of an emergency management organization. President Bush has continued to support emergency operations through his ongoing and outspoken support of the activities of DHS, which today houses FEMA.

Outside of government, the leadership of members of the business community and the community at large both play a critical role in making communities safer and better equipped to respond to major disaster events. This type of leadership has become even more important as we move forward with the new terrorist threat.

### **Partnerships**

An emergency management system is by definition a partnership. Traditionally the partners have included first responders, Federal, State and local government emergency management organizations and the voluntary non-governmental organizations such as the Red Cross, Salvation Army and others. Together these groups promoted preparedness and mitigation actions and conducted response and recovery operations.

In recent years, a new set of partners have become involved in emergency management including the business sector and the media. The new threat of biological and chemical weapons has resulted in a greater role for the public health system in emergency management.

Increasingly, the general public has become more involved in emergency management through Community Emergency Response Teams (CERT) and involvement in planning and implementing community preparedness and mitigation programs and actions.

How well these partners work together defines how well the emergency management system functions. Agreements such as the Federal Response Plan and Mutual Aid Compacts define the roles and responsibilities of each partner. Community agreements and partnerships define risks and what to do to protect families, homes and businesses from harm. Training and exercises allow partners to work together and to refine and enhance their roles.

In every facet of a successful emergency management system or function, partnerships leverage resources and technical skills, promote the exchange of accurate and timely information and ensure that all the resources of the government, the community and private sector are brought to bear on disaster issues.

### **Communications**

Communicating timely and accurate information to partners, to the public and to decision makers is a critical element in any emergency management function. This is especially true in response and recovery operations.

Key to good communications in emergency management is a leadership commitment to communicate with all stakeholders. This commitment is marked by including public affairs staff in all planning and operational activities, establishing clear lines of communications with all partners, making leaders available to the media to communicate messages to the public and ensuring that your public affairs staff has the training and the tools to be successful.

Good communications relies on the collection, analysis and dissemination of accurate and timely information. Good communications accurately defines the task, identifies how it will be accomplished and in what time frame. Good communications keeps all partners and customers informed and helps to set realistic expectations among all parties.

### **Training, Tools and Technologies**

Those staff and volunteers involved in emergency management cannot successfully do their jobs without the proper training, the tools and technologies. Ensuring that all personnel receive appropriate and current training is central to their ability to fulfill the mission of their organization. With the new terrorist risks, proper training for first

responders is critical to first protecting their lives and safety and the lives and safety of the public at large.

Well trained personnel must also have the tools they need to do their job effectively and efficiently. For example, FEMA provided its home inspectors with Palm Pad computers for entering data concerning a home inspection that standardized the cost estimating process and was linked to a computer based registration system for providing assistance to disaster victims. These tools allowed FEMA to reduce the time it took to get assistance checks to disaster victims from 30 days to 7-10 days.

New advances in technology occur daily and emergency management must embrace new technologies that enhance the ability to serve the public. Recent technological advances in tracking hurricanes have improved evacuation and warning protocols, new building design technology created the Safe Room to protect families and individuals from tornadoes and the increased use of GIS has improved land use and hazard mitigation planning.

### **Focus on Mitigation and Reducing Future Impacts**

Interest in hazard mitigation has grown in the past decade in response to the significant increase in the frequency and severity of natural and manmade disasters and the resulting loss of life and property and economic losses. Reducing the future impacts of disasters must be the foundation of any effective emergency management system or function.

Hazard mitigation efforts are most critical at the community level where land use and development decisions are made and construction codes and standards adopted and enforced. It is time that community leaders incorporated hazard mitigation into their decision making process not just for disaster issues but for everyday decisions on where and how a community grows and develops.

Business leaders and home owners must also incorporate hazard mitigation information and techniques into their decisions on where to locate their business or home or how to retrofit their business or home to protect their lives and livelihoods from disasters.

Promoting and investing in hazard mitigation efforts is the most direct way that families, businesses and communities can reduce the human and economic losses from future disasters.

## **Summary**

This book is comprised of emergency management case studies. The case studies have been grouped by the major topic areas in emergency management. In each case, we hope to illustrate what worked and what did not work and to highlight the factors discussed in this chapter that we believe are found in any successful emergency management system or function.