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DISASTER

Emergency Management
and Homeland Security

POLICY

& POLITICS

Richard
Sylves

Disaster Policy and Politics

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Emergency Management and Homeland Security

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Preface

Disasters and emergencies challenge people and their governments. Americans routinely want to know how government officials performed during and after events such as the 9/11 terror attacks of 2001; Hurricane Katrina in 2005; the British Petroleum (BP) Deepwater Horizon oil spill in 2010; the Tuscaloosa, Alabama, and Joplin, Missouri, tornadoes of 2011; Superstorm Sandy and the Moore, Oklahoma, tornado events in 2013; and the Boston Marathon bombing in 2013. They are also increasingly curious about how government provides post-disaster assistance, helps prevent future disasters and emergencies, and of late, how government goes about finding the money to pay for disaster response and recovery. This book is written for those interested in disaster policy, politics, and emergency management.

Disasters affect people and society in a great many ways. As disaster sociologist Dennis Mileti insists, disasters stem from more than simply "unexpected events." Disasters result from somewhat predictable inter-actions of the physical environment (earthquakes, hurricanes, floods, drought, tornadoes, and so on), the social and demographic characteristics of the localities that experience them (population, population density, education levels of inhabitants, economic level of development, social systems in place, and the like), and the durability and resilience of the constructed or built environment (such as buildings, bridges, roads, housing, and utility infrastructure).[1] Yet disasters also challenge the operation, resilience, competence, and responsiveness of government as a political system.

In the United States, disaster, whether from natural forces or human cause, has long had its own public policy and politics. The roots of this nation's disaster policy in part reside in the U.S. Constitution itself. Likewise, disasters for America have long had political implications for its government leaders, up to and including the president. What is more difficult for many to grasp is that humans are capable of producing disasters. Terrorism, failures of technology, and tolerated vulnerability to natural forces mean that disaster may in whole or in part be the result of human behavior. Second, owing to the national security relevance of disaster, stemming from public and official fears about the threat of nuclear attack in the past and the threat of terrorism in recent years, political actors shape people's conceptions of what a disaster is. That is, government officials and policymakers are in many respects coming to define, sometimes in concert with the news media, what disasters are and what constitutes a disaster or a disaster threat.

Consequently, as this second edition posits, in some ways disasters and emergencies are politically and socially "constructed" in the minds of the polity, particularly by those capable of influencing public opinion and public perceptions.[2] Complicating this further is the realization that global forces evident in climate change, as well as the threats posed by newly understood forces as immense as plate tectonics, earthquakes, and volcanoes, are confronting humankind with new types of survival challenges.[3]

Disaster policy overlaps and interweaves parts of other policy domains. One of the reasons disaster policy and politics defy easy explanation is that although seemingly episodic and rare, disasters and emergencies affect almost every other domain of public policy (defense, health, social welfare, housing and urban development, labor, agriculture, commerce, education, environmental protection, transportation, energy, criminal justice, and others). Since the era of deadly domestic terror attacks emerged, disaster policy and emergency management have been fused to, and some claim subsumed under, homeland security policy and national defense.[4]

Policy study,[5] so often conducted in other policy domains, furnishes a useful tool one may use to make sense of the politics and management of past disasters. It helps one to anticipate and predict government's response and reactions in the aftermath of disasters. The long-term evolution of the field of emergency management in general, and the rise of homeland security, has attracted the attention of scholars and students. Teachers and researchers have been drawn to the subject by a seemingly accelerated increase in the frequency and intensity of disasters, as well as by growing sources of information about disaster phenomena of many types. On top of this, the growth of a keenly interested audience comprised of both the general public and college students has not escaped notice.

Many among the general public anticipate that if they have not already been a victim survivor of disaster, they may well be one in the future; so why not become better informed and prepare? Recent generations of students of higher education are drawn to the subject of disaster by their interest in worthy humanitarian service and potential employment as an emergency management professional.

This second edition, much as in the first, contains both descriptive and theoretic material. Authors of every good textbook craft their works in a manner that educates and presents both facts and ideas. Good texts elicit thought, criticism, discussion, interpretation, and creation of new knowledge by their readers. This author hopes the second edition evokes these responses and that facts presented here will be a basis for idea building. This study may serve as a crucible in which the perspectives, experience, insightfulness, and expertise of readers, including teachers and students, launches discussion, debate, exchange of thought, and pathways to further study. The text is "not" a manual of practice doctrine, but it does present information about the conduct of disaster policy and how it has changed over time. Similarly, it is about some of the dynamic operational side of emergency management or as some would call it disaster policy implementation. Much of disaster policy and politics is about political, social, ethical, and economic values. In many though not all respects, values are open to individual and group interpretation. This study will make this apparent, but it will also allow readers to reason out problems such that they are invited to draw their own conclusions, which may vary from individual to individual to some degree.

Because emergency management fundamentally involves coordinated activity, and because much of this coordination work involves oversight and operational management of officials working at different levels of government and in different public and private settings, intergovernmental relations theory and analysis are most appropriate in disaster study. In addition, the framework of intergovernmental relations helps one appreciate that the definition of disaster is dynamic and is particularly influenced by political actors and forces.

Much has changed since the first edition of this book was published in March 2008. At the time, Democrat and Republican presidential hopefuls were in their thick of respective state party primary seasons. Months later Senator Barack Obama won out in his Democratic Party primary competition with Hillary Clinton and became the 2008 Democratic Party presidential nominee. When the general election was held in November 2008, Barack Obama outpolled his Republican opponent, Senator John McCain. Inaugurated in mid-January 2009, President Obama went on to confront one of the nation's worst and longest economic downturns since the Great Depression of the 1930s. The failure of huge banks and investment firms, and the collapse of the U.S. housing market, helped drive up unemployment and poverty levels. This environment had an effect on President Obama's approach to the management of disaster.

This second edition builds on core material of the first edition but does so in a way that incorporates what has transpired in the realm of U.S. disaster management since 2008. New cases have been added and outdated cases have been replaced. The second edition has three central purposes. First, the volume covers the period 2008 through 2013 but in a manner that does not overlook the importance of disaster policy and emergency management from 1950 to 2008, covered in the first edition. Second, this work incorporates essentials of published political, administrative, and theory analyses conducted between 2008 and 2013. Third, this version was field-tested in graduate courses the author taught at the George Washington University (GWU) and University of Delaware (UD). Moreover, colleagues and students at other universities who read and used the first edition were kind in offering feedback and suggestions for improvements in the second edition. My aim here is to produce improved and updated scholarship in the form of a worthy textbook.

Major Themes of Disaster Policy and Politics

The approach to disaster study taken in this book is through the study of public policy analysis, organizational management, and leadership. The book is thematic, intended to guide students through a wealth of material by employing a simple analytic framework and set of themes to help students in organizing the details and connecting them to larger concepts. Taken together, the framework and its concepts provide students with ways to understand and study disaster policy and politics.

The analytic framework focuses on the challenges presented in achieving effective intergovernmental relations across levels of government and through all-hazards emergency management. All-hazards emergency management saves us from a serial chapter-by-chapter study of earthquakes, hurricanes, floods, terrorism, and so on. Within the framework are four themes, which are threads within in each chapter of the book.

The first theme concerns emergency management in the United States. Most people associate disaster policy with the emergency responder occupational groups they have come to know and trust: firefighters, law enforcement, and emergency medical personnel. Public emergency management continues to rely on the support and contributions of these essential occupational specialties, but emergency management both includes and extends well beyond these occupational specialists. Emergency management appears to be the "application" side of disaster policy. Although this is true, emergency managers also contribute to problem identification, agenda building, policy formulation, and policy evaluation.[6]

A second theme is that disaster policy and politics constitute a worthy field of academic study. Disaster research has long been part of many academic disciplines. This book draws from political science and public administration. Secondarily it draws from disaster sociology and economics theory to demonstrate how disaster research has become a force in shaping disaster policy. Disaster researchers have become part of the politics of disaster in the United States. Disaster researchers continue to make both major and minor contributions to our understanding of disasters as political, social, economic, and physical phenomena. They have also advanced knowledge and understanding of human-caused and natural disaster forces. They have helped prevent or mitigate the effects of forces capable of producing disasters and they have used science and technology to forecast, monitor, track, and measure natural forces so that people around the world have been given advanced warning of disaster threats. Scientific, engineering, and particularly communications advances since 2008 have been remarkable. Emergency management continues its maturation into a profession, and those seeking to learn the profession are pressed to master it through interdisciplinary and multi-disciplinary education. Just as in the first edition, this revamped work has been developed for educational purposes more than simply "training" purposes. As a product of academic inquiry, information and observations offered in this book are intended to begin, not end, discussion, research, and knowledge creation.

The third theme involves management again but at the level of the elected executive. Presidents, governors, mayors, county executives, and city managers are major players in times of disaster and emergency. Past and present modes of intergovernmental relations in disaster management are examined and assessed from their vantage point. Presidents and the presidency itself occupy a central position in U.S. disaster policy and politics. How presidents lead, manage federal officials, cope with the news media, address federal-state relations, act on governors' requests for disaster and emergency assistance, define policy agendas, and choose political appointees for responsible posts all contribute to their ability to address the demands imposed by disasters and catastrophes. In many respects political, policy, and managerial decisions made by presidents and their administrations before a disaster significantly affect the ability of federal, state, and local government to mitigate, prepare for, and respond to disasters and emergencies. An overview of the tools of federal, state, and local interchange in disaster management is presented, as are several theories that provide a suggested course for analyzing the president-governor relationships that underlie presidential decisions to declare disasters. Since 2008 when the first edition went to press, the roles of presidents and governors in disaster politics and policy have been the subject of considerable academic and professional inquiry. This new edition extracts and blends in the findings of this executive focused scholarship.

The fourth theme of the book involves civil-military relations and homeland security. In the United States, the military is an instrument of federal and state government and has long played a role in disaster management, usually in the emergency preparedness and response phases. Since 1950, when modern-era American emergency management arguably got its start, disaster policy and politics have overlapped, been periodically dominated by, and paralleled U.S. foreign policy and national defense policy. The Cold War era (approximately 1946–1990) of U.S.-Soviet conflict was a time when American federal, state, and local emergency managers had to work on matters of civil defense against nuclear attack. Civil defense of the Cold War era sometimes complemented, but often confounded, emergency management aimed at natural disasters and nonwar human-caused calamities. During the 1970s and 1980s, as emergency managers (at all levels) matured in their ability to address natural disasters and as the need for civil defense against nuclear attack diminished, military dominance of disaster management waned. However, the rise of terrorism internationally, particularly the possibility that terrorists would strike inside the United States and that they might use massively destructive weapons, set the stage for the era of homeland security. The terrorist attacks of 9/11, made at least part of the envisioned nightmare a reality. Today, once again, U.S. disaster policy and politics, as well as American emergency management, cannot be fully understood apart from their relationship with national security and defense policy. However, the nation has dedicated great attention and resources to counterterrorism for well over a decade. At this writing the U.S. Department of Homeland Security (DHS) is beginning to move into its teenage years. The Federal Emergency Management Agency (FEMA) has been part of DHS so far under two presidents. The second edition acknowledges these facts and reviews the accommodations FEMA and other parts of DHS have made in order to work cooperatively. While critics of the FEMA submersion into DHS still deserve a hearing, disaster policy and politics have in various ways "married up" with DHS offices tasked with counterterrorism and other homeland security– related missions.[7]

Organization of the Book

Chapter 1 presents the broad landscape of U.S. disaster policy and management. It furnishes a set of useful definitions, many employed in subsequent chapters. The chapter explores the profession of emergency management and introduces and explains many aspects of emergency management, most particularly the phases (some of which overlap and are nonsequential) of the so-called disaster cycle: disaster mitigation, disaster preparedness, disaster response, and disaster recovery. Also examined is disaster study as a field of scientific research. Themes, or threads, appear in other chapters of the book, among them the vacillating political salience of disaster to the general public and its elected representatives. The chapter introduces presidential disaster declarations—something in the United States that entrusts presidents and state governors with great responsibility for disaster management. Chapter 1 makes clear the fragmented nature of disaster management responsibility both vertically and horizontally across and within levels of government. This new edition outlines the prodigious range and number of stakeholders when it comes to disasters and emergencies. Disasters have a political side, but as later chapters show, the politics of disaster should never be oversimplified or pejoratively labeled. Disaster politics inherently denote the nation's federal system of democratic governance. Americans do not want to completely entrust disaster management to an unelected set of bureaucratic officials. Deciding "what a disaster or emergency is," in the American system is both a political and policy determination, something that over the past sixty to seventy years has been entrusted to elected executives. Relatedly, disaster policy and politics is also about "public money" and pre-disaster insurance.

Chapter 2 offers an assortment of theory tools that can be used to study disaster policy, politics, and management. Three normative theories—Jeffersonian, Hamiltonian, and Jacksonian—are proposed as ways to understand and examine the context and work of disaster management. Jacksonian normative theory has been added in this second edition. These three relatively simple theories of disaster policy and management posit that there is a continual tension between the need to promote political responsiveness and representative democracy and the need to work dispassionately, professionally, scientifically, technocratically, and with minimal political bias.

Chapter 2 of this edition explores the role of theory in establishing a profession of emergency management. It also examines bureaucratic politics theory as well as public management theory, both as they relate to disaster policy and emergency management. The practice of emergency management benefits from "lessons learned" before, during, and after disasters. In this second edition, analytical scientific approaches to the field are compared to and contrasted with social constructivist approaches to disaster study. In addition, chapter 2 explores network theory (new in this edition), principal-agent theory, and intergovernmental relations theory. New in this edition is a synopsis of the emerging National Disaster Recovery Framework (NDRF) driven by conceptual development of a "theory of disaster recovery." Also new is a section on "still developing" complexity theory, the complexity paradigm, and self-organizing organizations. The chapter closes with a short but useful discussion of how knowledge in emergency management is learned, codified into open published work, and diffused to others.

Chapter 3 is a short history of disaster policy and politics from the administration of Harry S. Truman to that of Barack Obama. The major defining federal laws of U.S. disaster policy are explained and summarized. The forms of disaster relief made available to state and local governments, as well as to victims of disaster, from 1950 to the present are described. FEMA predecessor organizations (1950–1979) are introduced. Chapter 3 provides a law, policy, and administrative history of U.S. emergency management in chronological terms. It is also the story of emergency management's relationship with civil defense against nuclear attack. Part of this in the yin and yang of emergency management's civilian side and its national security side. Included is the story of the establishment of FEMA, created by one of President Carter's executive orders in 1979.

Chapter 3 carefully reviews how presidents from Truman on have shaped, used, and conducted disaster policy and management on a national level, though chapter 4 is wholly dedicated to each president's use of disaster declarations. Chapter 3 highlights the growing importance of television news coverage of disasters on a national and international scale. It elucidates the "gravitational pull" of emergency management toward the White House of successive modern presidents. Beyond this, it explains how a tiny agency gained heft as a federal coordinating

organization capable of yoking up nearly every federal department in matters of major disaster or catastrophe. It explains the evolution of "all-hazards" disaster management and why it became a modern "doctrine" of emergency management at all levels of government. Included as well are post–9/11 homeland security era matters important to understanding emergency management as it is being conducted in the twenty-first century. No less important is the rise of disaster mitigation as a policy priority.

Presidential disaster declarations are the main subject of Chapter 4. American presidents since 1950 have been able to issue declarations of major disaster. Governors are the only officials authorized to formally ask the president to issue their respective states and disaster-affected counties declarations of major disaster. Since 1974, presidents have also been able to issue declarations of emergency to requesting governors. Emergency declarations are predicated on the assumption that the declarations serve immediate lifesaving needs; they may be issued immediately when a disaster occurs or when a disaster is imminent. This second edition covers the 2009–2013 presidential administration of Barack Obama. Earlier trends from presidents serving between 1989 and 2008, such as increasing the scope of emergency and major disaster declarations and increasing the percentage of governor declaration requests approved by the president, continue apace in the Obama years.[8]

Examining the process and record of presidential declarations of major disaster is a useful way to learn about disaster management in the United States, an insightful way to investigate the geographical and historical record and statistics of U.S. disaster experience, and an illuminating way to grasp some of the politics of disaster. Thomas A. Birkland is correct in his assertion that disaster policy in the United States is driven by event-related policy change.[9] Disaster declarations are a good compendium of disaster events. The record of disaster declarations also reveals in some respects how presidents have coped with disasters and emergencies during their terms in office. Disaster law and policy are aimed at furnishing the nation, its subnational governments, and its people a "shock absorber" for catastrophes and calamities of many types.

Chapter 4 is also a "cold hard facts" chapter. It explains what the terms *major disaster* and *emergency* mean in presidential declaration parlance. It provides people answers to questions such as the following: What can I expect to receive if I am a surviving victim of disaster? What help will my family receive? How do I qualify for government help? How do I make application? In many respects, chapter 4 is an elucidation of the "conventional model" of disaster victim assistance discussed in chapter 9 (new in this edition). The latter chapter is about matters of victim compensation and methods of government funding distribution based on the cause of the disaster in question (9/11 terrorism vs. natural disaster). Chapter 4 describes the White House "machinery" in place to help the president consider governor requests for major disaster and emergency declarations. More than this, chapter 4 considers the disputes and controversy surrounding criteria of deservedness for a presidential disaster declaration. It explores each president's freedom to decide what is or is not a disaster or emergency. Chapter 4 takes up the hotly debated issue of "paying for presidential disaster declarations" via federal borrowing. Relatedly, Congress provides regular infusions of spending authority (based on Treasury borrowing) to the president when disaster supplemental appropriations are needed. Most people do not know that state and local governments themselves are often eligible to receive federal disaster assistance. Presidential disaster declarations often provide them this help, but controversy sometimes arises regarding their deservedness for such aid. FEMA sets thresholds of eligibility for states and counties, though each president is free to follow or ignore these thresholds case by case. Consistent with the volume's subtheme of intergovernmental relations theory, several theories regarding whether presidential disaster assistance suggests dominance of a presidential distributive politics model, a congressional dominance model, or a "need-based, means-tested" model are put forward.

Chapter 5 delves into the realm of the disaster researcher. People working in the physical, social, and biological sciences have long been engaged in various forms of disaster study. Disaster sociologists have pioneered and enriched the study of disaster in ingenious ways. Also, disaster researchers have become political interest groups in need of engaging in "big science" with the backing of government research funds. Disaster policy and emergency management are in some respects codependent on natural science and defense science researchers. Engineers have a major presence across the entire realm of disaster policy and emergency management for reasons this study will explore. Chapter 5 updates through 2013 federal research agency activity in disaster policy and management. The chapter provides a brief overview of social science contributions to the study of disaster. It also portrays the role of

scientists and engineers in each phase of the disaster cycle. Embedded in the chapter is a mini–case study of the BP Deepwater Horizon oil spill in the Gulf of Mexico in 2010. Chapter 5 has a short section on the role of the public health and emergency medical side of disaster response, and that includes a mini–case study of the Boston Marathon bombing of April 2013. The earthquake engineering portion of the chapter presents a mini–case study of northeast Japan's earthquake and tsunami of March 2011 with special emphasis on the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi nuclear power plant complex. U.S. advances in seismic mapping and earthquake engineering follow, as well as a section on tornado research.

In Chapter 6 the focus is the U.S. system of intergovernmental relations. The chapter introduces intergovernmental program management using a mini–case study of the 2013 Boulder, Colorado, area flooding. For years U.S. emergency management has been perceived as chiefly a local government responsibility, and in many respects it remains fundamentally that. Nevertheless, state governments have come to assume more jurisdiction over management of emergencies and disasters, often in partnership with their respective local governments. Governors are major players in disaster policy and management. Likewise, and more especially so, the federal government has assumed ever greater jurisdiction over major realms of disaster management. The chapter outlines various formal instruments of federal-state, state-to-state, and local-to-local emergency response agreements. The National Response Plan (NRP) and its 2008 successor, the National Response Framework (NRF), as well as the National Incident Management System (NIMS), make up the administrative superstructure of disaster policy and law that emergency managers collectively carry out. Within NIMS is the Incident Command System (ICS), a tactical instrument of response, multiagency coordination, and management. Also within NIMS is multiagency coordination systems useful in addressing disasters that have expansive and/or multiple damage zones. Chapter 6 updates FEMA organization as well as NRF and NIMS organizational issues. No less important in disaster management are nongovernmental organizations (NGOs): nonprofit organizations active in disasters and private corporations, particularly those responsible for managing vital public lifeline resources and infrastructure and those performing disaster-related work under government contracts. Chapter 6 has revamped the for-profit government contractor section. Also, more attention is given to volunteers and volunteer organizations active in disaster work at home and abroad. Also revisited are the politics of volunteer organizations.

Chapter 7 concerns civil-military relations and national security, topics touched on in earlier chapters and previously introduced in the themes section. In this chapter the issue of militarization of disaster policy takes center stage. Matters regarding the Posse Comitatus Act of 1878 are briefly touched on. Much of the chapter considers the pros and cons of military use in disaster management. The role of the National Guard in disasters and emergencies and the role of the military before, during, and after both the 9/11 terrorism disaster and Hurricane Katrina (2005) are explored. This second edition has added a "How Things Work" box laying out how nine different states entrust their respective National Guard or military departments with some or all state responsibility for emergency management and homeland security. This second edition incorporates emergency management duties of the U.S. Army Corps of Engineers (USACE), the U.S. Coast Guard, and the U.S. Northern Command (USNORTHCOM). Moreover, this edition scrutinizes the former, controversial color-coded Homeland Security Advisory System (HSAS) of DHS and describes its replacement, the National Terrorism Advisory System (NTAS). Relatedly, this edition raises the quite topical issues of the rise of a security military-industrial complex and the erosion of personal privacy owing to counterterrorism penetration of telecommunications and the Internet worldwide. Included in the chapter is an overview of how anti- or counterterrorism federal programs under homeland security have affected the nation's system of disaster management. Civil defense, as a national security concern and as an instrument of national military defense, has long had a place in the history of U.S. disaster policy; when civil defense left the stage in the mid-1990s, terrorism prevention and preparedness took its place. The Urban Area Security Initiative (UASI), the State Homeland Security Program (SHSP), Law Enforcement Terrorism Prevention Program (LETPP), and Emergency Management Performance Grants (EMPGs) are all programs briefly summarized in Chapter 7.

Chapter 8 proceeds on three levels. Disasters have occurred in every nation of the world. On the first level, the United States maintains a policy and capacity to help other nations that experience disasters and emergencies, including its trust and commonwealth territories (present and former under agreements). This edition reviews the

instruments of this policy. FEMA and supporting federal agencies, most particularly the U.S. Department of the Interior, handle disaster management for U.S. trust and commonwealth partners. The U.S. Department of State, through U.S. Agency for International Development (USAID), the Office of U.S. Foreign Disaster Assistance (OFDA), and its U.S. ambassadors posted in nations around the world are integral to U.S. foreign disaster assistance. As this chapter shows, the U.S. Department of Defense (DOD) also plays a very meaningful and impactful role in America's post-disaster aid to other nations. Near the end of the chapter, FEMA and OFDA are compared and contrasted with one another.

This new edition tells the story of America's post-Hurricane Katrina, in 2005, experience. Then the United States had done little to prepare for the possibility that other nations would extend help to the United States after a catastrophic disaster. Many nations offered the United States a variety of aid after Katrina, some of which the United States accepted and some of which the United States turned away, sometimes with regrettable diplomatic awkwardness. In international terms, U.S. disaster policy is part of U.S. foreign policy.

The United States, as a major contributor to the UN, has helped various UN offices and programs address disasters and emergencies in other nations, particularly in developing nations, which may lack the capacity to engage in emergency management before, during, or after disasters. Both the United States and the UN engage in disaster relief work for various humanitarian reasons, sometimes separately but often cooperatively.

The UN itself comprises the second level of analysis in Chapter 8. This chapter provides a brief overview of the UN and its array of disaster management programs. Though one might quickly become overwhelmed and confused by the "alphabet soup" assortment of UN aid agencies, Chapter 8 provides encapsulated and simple summaries of what the most essential UN post-disaster agencies do.

On a third level, Chapter 8 compares and contrasts U.S. domestic and international disaster management with UN disaster management. Some features of American emergency management have been emulated by other nations, but it is also true that American emergency management, owing to U.S. military and non-profit organizational work elsewhere, has helped inform and improve emergency management for Americans at home. Major developed nations are not immune from the forces of disaster.

Chapter 9, new for the second edition, examines several thorny subjects involving hotly debated questions. First, when disasters striking the United States and its territories produce victims (survivors and fatalities), how is victim compensation provided? Just what does government (all levels) owe individuals, families, communities, localities, states, and businesses after a deadly natural disaster? Second, when foreign terrorists conduct attacks inside the United States and there are deaths, injuries, disruption, and property loss, are victims of these attacks (living or dead) entitled to some amount of government compensation for their loss or for what their loss means to others? Third, what role does government have when a corporation and its employees or owned technology cause a major disaster?

Victim compensation after acts of terrorism at home deserves its own chapter because it is a phenomenon emerging in parallel with concerns about conventional government disaster assistance. Disaster compensation moves to center stage questions such as the following: Does the federal government have a policy for compensating its victims of war at home? When disaster or catastrophe fatalities are massively great, are U.S. victims at home owed something above and beyond what they receive in conventional government disaster assistance?

On top of this, when special victim compensation funds are established, how is money distributed among victims? The September 11th Victim Compensation Fund (VCF), a rather unique federal compensation fund for injured survivors and victims' families, employed a method referred to in this study as the "master model." The Special Master is a single person in whom authority is entrusted to devise rules, methods, and procedures for making awards to applicants, and the Master is empowered to actually make such decisions. Since the 9/11 attacks, victim compensation funds have been established to compensate aggrieved parties in the Virginia Tech campus shooter incident and in the BP Deepwater Horizon oil spill, though funds distributed in these two cases were not federal but private donations and corporate funds respectively. Chapter 9 asks, does the Master Model of victim

compensation hold advantages over the conventional model of government disaster victim payment (perhaps greater fairness, more social equity, inclusion of undocumented aliens, greater personal compassion?). Is disaster victim compensation appropriate restitution when a government or private corporation causes great harm or damage? Use of the Master Model is examined in the case of the BP Deepwater Horizon 2010 oil spill into the Gulf of Mexico.

Chapter 9 closes with a comparison of the convention model of disaster victim compensation and the model employed to stand up and implement the September 11th VCF. Within this is a review of the pros and cons of using Special Masters and the master model of policy implementation.

Chapter 10 supplies a brief set of special issues and "gap" questions. How important is turnover of politically appointed emergency managers? Do Americans expect too much when disaster befalls them? Who are the winners and losers under U.S. disaster policy? How has government disaster relief become more politicized over time? Do we appreciate the importance of volunteers when disasters strike, particularly in this age of social media? Can the United States succeed in building its own disaster resilience? Has FEMA found a permanent home in DHS, and what are the implications of this, if true? The chapter offers some observations about the likely future of disaster policy and politics. Included in this final chapter are a series of major questions, many of which have yet to be properly addressed by the public and elected representatives.

Special Features

This book provides readers with bold-faced key words in the text and listed at the end of each chapter, and a glossary defines or explains these. All the chapters provide source citations. Also helpful to readers and researchers are the master bibliography and index that appear at the end of the book.

The book employs two general types of boxed features, which appear in most chapters:

- "How Things Work" touches on the intersection of process, politics, and policy and delves more fully into the rationale and implication of certain features of government and how things "work" in the real world.
- "History's Lessons" ties contextual history examples to the analytical framework.

The boxes help highlight facts drawn from accounts of specific disasters or provide more detailed documentary evidence from the field of disaster policy and emergency management. Boxed material complements textual material and spotlights topics, issues, or documents in an engaging manner.

The purpose of this book is to provide an introductory, although substantial, understanding of disaster policy and politics. The work synthesizes the ideas, methods, and approaches used by other scholars of the subject and offers my own observations and insights as well. I sought to produce a balanced work that was neither partisan biased nor a political polemic. I am an unapologetic supporter of emergency managers and what they do. I am thoughtfully concerned about, but not necessarily an opponent of, military and national security involvement in disaster policy and emergency management. This work concedes that disaster policy and emergency management, like any field of public policy, has flaws and deficiencies. Government manages many disasters capably. However, some have been poorly managed. Occasionally, often in catastrophic circumstances, government disaster management has been abysmal. The field of disaster policy and politics is ever-changing.

Acknowledgments for the Second Edition

One major reason I so much wanted to write this second edition is because textbooks exclusively on disaster policy and politics were, until recently, not available for graduate and undergraduate political science, public administration, and management students.[10] Owing to the success of the first edition of *Disaster Policy and Politics,* it made no sense to delay publication of a revised second edition.

I am grateful to colleagues at GWU, UD, and to professors and students at other universities and colleges. Many ideas in this work I owe to conversations with my friend and fellow hiker Dr. Malcolm Watts, now retired from AstraZeneca International.

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About the Author

Richard Sylves

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He conducts research and has taught courses in emergency management, disaster policy, environmental hazard management, energy policy, public budgeting, public administration, organization theory, and public policy. In 1988 he developed and taught until his UD retirement, Politics and Disaster, one of the first such courses offered in political science and public policy; the first and now second edition of this book had its origins in his UD and GWU experience. Dr. Sylves has held two postdoctorates, one as an associate producer for WHYY TV-12 Public Television News, which serves the Wilmington, Delaware/Philadelphia, Pennsylvania area, and a second as a fellow of the UD Center for Advanced Study. He has served on a National Academy of Sciences National Research Council panel, Estimating the Costs of Natural Disaster, and he received research funding from the Public Entity Risk Institute (PERI), and from the FEMA Higher Education Program both before and after the FEMA transfer into the U.S. Department of Homeland Security (DHS). From 2002 to 2005, he served as an appointed member of the Executive Committee of the National Academy of Sciences Disasters Roundtable, where he participated in or helped organize with others workshops on various disaster-relevant topics, including 9/11, floods, earthquakes, and disaster prevention. He also helped cofound, with Professor William Petak, the Section on Emergency and Crisis Management (SECM) of the American Society for Public Administration. From 2004 until his UD retirement in 2010, he and his webmaster, Professor David Racca, produced and maintained a website "All about Presidential Disaster Declarations," previously found at www.peripresdecusa.org. The site has returned in 2014, owing to the kind hosting and support of Distinguished Professor Susan Cutter of the University of South Carolina's Department of Geography and director of the Hazards and Vulnerability Research Institute and Research Professor Chris Emmerich. Dr. Sylves recently received the Wayne Blanchard Award for Academic Excellence in Emergency Management Research. He is proud to know he is commonly referred to as "the presidential disaster declarations guy."

To my wife, Claire; my sons, Nate and Eric; their wives, Elizabeth and Alison; and my grandchildren, Sienna, Logan, and Michaela

Chapter 1 Disaster Management in the United States

An EF-4 Tornado Ravages Portions of Tuscaloosa, Alabama, April 27, 2011. Part of a Record outbreak of Tornado-Producing Storms that Stretched from Arkansas to Virginia, Some Sixteen People Perished in the Vicinity of this Twister. Devastation was Immense in Tuscaloosa, and not Even the City's University of Alabama Campus was Spared.

(Source: AP Photo/The Tuscaloosa News, Dusty Compton.)

THE TORNADO TOUCHED DOWN AT ABOUT 5:15 P.M. IN THE VICINITY OF TUSCALOOSA, part of a severe storm and tornado outbreak. Earlier in the day, three funnel clouds on the ground simultaneously twisted through Cullman County.

> The storm ripped through six states killing 200 people, with the rate expected to rise. Hardest hit was Alabama with 131 fatalities, 32 in Mississippi, 15 in Tennessee, 13 in Georgia, eight in Virginia and one in Kentucky. In Tuscaloosa, a mile-wide tornado killed 15 people and injured hundreds, tossing boats from a store into an apartment complex, ripping holes in rooftops, and destroying a swath of retail establishments along a busy street. Several people had to be rescued when an apartment roof collapsed in north Birmingham.[1]

In all, "11 people died in Jefferson County and officials expect that number to rise. Mark Kelly with the Jefferson County [Emergency Management Agency] says he expects the cleanup effort to be a 'multi-day recovery operation.'"[2]

Gov. Robert Bentley, R-AL, mobilized approximately 1,400 members of the Alabama National Guard to provide emergency assistance to the Alabama counties impacted by the severe weather outbreak. The troops will help with search, rescue, and debris removal and also provide security assistance to local police.[3] President Barack Obama declared a state of emergency in Alabama, clearing the way for Federal Emergency Management Agency (FEMA) assistance to help with the response efforts.[4] Not long after, the president issued the Alabama governor a major disaster declaration covering heavily damaged counties of the state.

Hundreds of buildings and homes were leveled by the tornado, and Wednesday night there were fears more victims could be buried beneath the rubble. In Birmingham, the tornado cut an imposing figure along the city's downtown skyline. As of 9:00 p.m., more than 412,000 people were without electricity, according to Alabama Power.[5]

> Tuscaloosa Mayor Walter Maddox says he expects the numbers of casualties to rise. Maddox planned to meet with members of the City Council to pass emergency powers, including a curfew, if necessary. In a news conference, the Mayor said the recovery of the city would be seen in the spirit of the people.[6]

"Throughout Tuscaloosa, citizens are reaching out to each other and demonstrating that our faith will overcome all, even in this dark hour,"[7] he said. The tornado barely missed the campus of the University of Alabama, although several off-campus housing complexes were damaged or destroyed. Michael Neese, twenty-one, a junior at the university, was in his apartment off 15th Street when the tornado passed by. "It was like a white cloud just twirling in the parking lot next door to me," he said. "It tore Tuscaloosa up. All of 15th Street is gone."[8]

The deadly tornado outbreak of late April 2011 across the heart of the American South demonstrates the awesome power of nature and the increasing resilience of families, communities, and governments. The shock and surprise of the tornado strikes in heavily populated areas, and their deadly results made national and world news. But the emergency and community response; the speed and effectiveness of the local, state, and federal incident management system; and the rapid pace of cleanup and recovery are also truly remarkable. How is it that states, counties, and cities of the United States can withstand such devastating assaults from nature?

From the nation's earliest days, coping with disasters and emergencies stemming from natural forces or from non-attack human causes was left to individuals, to secular or religious charitable organizations, or to voluntary actions of groups at the community level.[9] For more than a century the prevailing social and legal view was that disasters were "acts of God."[10] As such, it was up to surviving disaster victims—perhaps aided by altruistic individuals, family members, or organizations—to recover from such dire circumstances. As the nation developed economically, as business and industry grew, as capital formation advanced, and as people came to perceive the world with more scientific rationality, Americans began to understand disaster in a different and more logical way. Earthquakes, volcanic activity, mudslides, landslides, and avalanches were explained in geoscientific terms. Severe storms, tornadoes, hurricanes, and their ensuing manifestations— floods, straight-line winds, storm surges, erosion, droughts, and the like—were examined and largely explained by meteorologists, atmospheric scientists, and climate researchers.

The private sector sought to adapt to the possibility and risk of disasters through the use of insurance and reinsurance systems. By distributing the risk through private insurance, those suffering losses from a disaster had a better chance to rebound economically. Property casualty insurance protected business owners as well as homeowners and owners of other property, such as cars and boats, but not everyone could afford the amount of insurance thought prudent.[11]

When a disaster inflicted damage upon a region and its economy on a seemingly random and irregular basis,

private insurers calculated that they could profitably sell policies to cover such things as fire, theft, and wind damage only as long as thousands of policyholders did not file claims for loss all at once and as long as a great many more people bought the insurance than filed claims on it. Major earthquakes, hurricanes, and floods that devastate highly developed and heavily populated areas often generate a colossal number of claims in a very short time. In the late 1940s and early 1950s, private insurers discontinued selling flood insurance. In addition, the insurance industry found it profitable to market commercial earthquake insurance but less so to sell residential earthquake insurance. And only days after the terrorist attack on New York and the Pentagon on September 11, 2001, private insurance companies eliminated provisions of their policies covering acts of terrorism.[12] The failure of insurance to cover various types of disasters represents a market failure that by default demanded government action.

Government disaster relief in America is in many ways partnered with nonprofit organizations—some of them secular and some of them religious. For many decades, charitable organizations ministered to those who could not recover from disaster through private insurance. However, inadequate social giving and deficiencies in the methods of relief allocation used by some charities often failed to meet the full range of human needs created by disaster losses. Today federal, state, and local governments sponsor a host of programs that rely tremendously on volunteers and altruistic organizations to do the work of ministering to those in need.[13]

Because the United States is a democratic republic with a national constitution, and because it is composed of three countervailing branches of government, responsibility for protecting the polity from harms posed in emergency circumstances falls largely on government institutions operating in accord with certain laws. The U.S. Constitution clearly entrusts the president and Congress with the job of providing for the common defense. Preventing, repelling, responding to, and recovering from the effects of attacks on the American homeland perpetrated by other nations or by terrorists who are stateless have always been a cardinal responsibility of the federal government.

When the citizenry generally accepted that disasters were not simply acts of "God," and when the American private sector conceded that the insurance industry could not cope with the complete panoply of disasters, it was time to press for government action. The creation and maintenance of public emergency management agencies is a product of public policymaking. Post–World War II recovery involved massive U.S. assistance to war-ravaged democratic nations of Europe through programs such as the Marshall Plan. This impelled many Americans to ask why the United States had no similar programs for disaster recovery at home. Congress answered their concerns with passage of the Disaster Relief Act of 1950, a law that though unrecognized at the time, created the architecture of modern U.S. disaster assistance and emergency management.

As in many domains of public policy, disaster policy emerged at the local level first. Neighborhoods, local communities, and local governments were often forced to provide for both public safety needs and their own disaster recovery.

Governments, too, are property owners. Local and state governments not only own and operate public schools, public hospitals, and government office buildings but also often own and operate important public utilities, roads, bridges, ports, bus and light rail systems, airports, and other public infrastructure. Most local and state governments do not buy private insurance to protect themselves against damage caused by disasters. Consequently, local governments have often petitioned their state governments to provide financial help after disasters, in lieu of raising local taxes in a time of suffering to pay for their disaster recoveries.

Governors, as well as mayors, city managers, or other local executives, have the power to declare or proclaim disasters or emergencies in their respective jurisdictions. Local and state taxes have been used to pay for significant shares of local and state government disaster loss. Owing to the damage caused by catastrophic multistate disasters and disasters that cover huge portions of single states, the federal government has gradually been expected to provide disaster relief to disaster victims and to local and state governments themselves. Since 9/11, disaster management has been more tightly linked to what is called terrorism consequence management. Even before 9/11, under all-hazards emergency management, all levels of government had been in the business of preparing for and responding to acts of terrorism inside the United States. The so-called Nunn-Lugar-Domenici Act (Title XIV of

the 1996 Department of Defense Authorization Act) through amendments approved in 1999 mandated that the federal government furnish major metropolitan jurisdictions with training and equipment that could be used to help local authorities thwart terrorist attacks of various types or respond to such attacks that actually occur.[14]

The evolution of disaster policy across all levels of American government has helped create the field of emergency management. This chapter explores what emergency management is as an occupation, as a field of study, and as policy and politics. It elucidates the fundamental challenges of emergency management; it highlights the need for effective intergovernmental relations, and it introduces the phases and cycle of emergency management.

Emergency Management as a Profession

Disaster management is seemingly an oxymoron.[15] Disasters are by definition destructive, calamitous, and often deadly or injurious events, so how is it possible to conceive of managing one? Some insist that disasters cannot be "managed" at all.[16]

From a national perspective, disaster management in the United States has its roots in civil defense. America practiced various forms of civil defense at least as long ago as World War I and perhaps as far back as the War of 1812. Civil defense was part of the domestic realm of the U.S. experience during World War II. After World War II, as America's Cold War with the Soviet Union emerged, local communities were pressed to continue civil defense. When the Soviet Union detonated its first atomic bomb in 1949, President Harry S. Truman, and later President Dwight D. Eisenhower, sought to mobilize the nation to prepare for civil defense against nuclear attack. To this day, U.S. local emergency managers, whether they like it or not, owe the origin of their positions to civil defense work.

Over the years, civil defense work moved through a very long "dual use" phase, in which federal support to local civil defense provided overlapping benefits to emergency management of natural disasters. Emergency management as a profession underwent gradual "civilianization." Preparedness and response to domestic natural disasters gradually supplanted and replaced a civil defense focused on national security.[17]

One excellent definition posits, emergency management is the discipline and profession of applying science, technology, planning, and management to deal with extreme events that can injure or kill great numbers of people, do extensive property damage, and disrupt community life. Efforts are made to limit losses and costs through the implementation of strategies and tactics reflecting the full life cycle of disaster: preparedness, response, recovery, and mitigation.[18]

An emergency manager is someone who has the day-to-day responsibility for emergency management programs and activities.[19] They marshal and distribute resources to mitigate (lessen the effect of or prevent) hazards, and they prepare for, respond to, and recover from the effects of all types of hazards. They work in every level of government. Some work in the private sector for businesses and corporations and some may labor on behalf of nongovernmental altruistic organizations. Because disasters have the potential to affect almost every government agency or program, people with various emergency management duties can be found in almost every type of government agency. In the United States, local emergency managers may hold the title "emergency manager," but it is more likely that they hold a different title, such as director of public safety, sheriff, fire chief, police chief, or city or county manager. In some local areas, the job of emergency manager might be assigned to one of the following civil servants:

- A civil defense coordinator or director
- A civil preparedness coordinator or director
- A disaster services director
- An emergency services director
- A police or fire chief

Some local emergency managers are paid and some are not. State and federal emergency managers are paid civil servants, and those in the highest positions may be politically appointed to their posts. Many federal, state, and local emergency managers are full-time professionals. However, in many relatively rural or low-population counties and municipalities, emergency managers are part-time volunteers, some of whom may have professional education or training.[20]

Owing to the breadth and complexity of many disasters, the field of emergency management requires multidisciplinary and cross-disciplinary approaches. It requires a wide variety of expertise and technical skills: social welfare, community and land-use planning, civil engineering, public works management, environmental

science, supply chain management, and information technology, to name a few. Many emergency managers come from emergency responder occupations that are important in emergency management: the fire services, law enforcement, and emergency medicine. Most emergency managers must understand elements of public law, public management, environmental policy, and disaster sociology. At the local level, emergency support services are usually within the departments of local government. These units are expected to be staffed in a way that enables them to respond to emergencies twenty-four hours a day. Their workers typically come from jobs in law enforcement, fire protection, rescue operations, environmental protection, and public works, and they are the backbone of local emergency response.

There are several different certification programs for emergency managers. There is the FEMA Professional Development Series (PDS) Certificate, the Advanced Professional Series (APS) Certificate, and the International Association of Emergency Managers (IAEM) Certified Emergency Manager (CEM) and Associate Emergency Manager (AEM) Certificates. The CEM is considered by many to be the top certification in emergency management. Created as a joint venture by FEMA and the IAEM, The CEM was developed as a standard to recognize professional competency in emergency management across the nation. Since the creation of the CEM, it has spread worldwide and CEMs number in the thousands.[21]

Advancing Emergency Management as a Profession

The organizations that are presented next represent a share of those with strong interest in emergency management. These organizations have helped make emergency management a full-fledged profession, but their variety connotes how multidisciplinary and interdisciplinary the field of emergency management actually is.

- *American Public Works Association, Council on Emergency Management.* The American Public Works Association (www.apwa.net) is an international educational and professional association of public agencies, private sector companies, and individuals dedicated to providing high-quality public works goods and services.
- *American Planning Association.* The American Planning Association (www.planning.org) is a non-profit public interest and research organization. Members are involved, on a day-to-day basis, in formulating planning policies and preparing land-use regulations that will meet the needs of people and society more effectively.
- *International City/County Management Association.* The International City/County Management Association (www.icma.org/main/sc.asp) is the professional and educational association for appointed local government administrators throughout the world.
- *American Society for Public Administration, Section on Emergency and Crisis Management.* The American Society for Public Administration (www.aspanet.org/scriptcontent/index.cfm), established in 1939, is the largest and most prominent professional association in the field of public administration. The Section on Emergency and Crisis Management (SECM) was formed in 1985 largely through the efforts of William Petak of the University of Southern California. SECM has some 200 to 300 members, and most of them are professors students, or practitioners of the field.
- *IAEM.* The IAEM (www.iaem.com) is a nonprofit educational organization dedicated to promoting the goals of saving lives and protecting property during emergencies and disasters. IAEM is primarily composed of local emergency managers. It operates a CEM program.
- *National Emergency Management Association (NEMA).* NEMA (www.nemaweb.org) is the professional association of and for state emergency management directors.
- *International Sociological Association (ISA).* The ISA is a nonprofit association for scientific purposes in the field of sociology and social sciences. The ISA was founded in 1949 under the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO). The goal of the ISA is to represent sociologists everywhere—regardless of their school of thought, scientific approaches, or ideological opinion—and to advance sociological knowledge throughout the world. Its members come from 109 countries. The ISA Research Committee on Sociology of Disasters has made many contributions to both the study and field of emergency management.
- *The International Emergency Management Society (TIEMS).* TIEMS (www.tiems.org) has worldwide membership that includes emergency managers and social science researchers.[22]
- *International Association for Disaster Preparedness and Response (DERA).* DERA is a membership organization founded in 1962 as a nonprofit association linking professionals, volunteers, and organizations active in all phases of disaster preparedness and emergency management. DERA is an independent, nongovernmental organization (NGO) with dual missions of professional support and disaster service.[23]

An important contributing organization to the profession is the Emergency Management Accreditation Program (EMAP). EMAP maintains a voluntary assessment and accreditation process for state or territorial, tribal, and local government emergency management programs. EMAP conducts baseline assessments of all state and territorial emergency management programs. EMAP combines self-assessment in accord with accepted national standards; steps in the process include documentation of compliance, independent evaluation by trained assessors, and—for accreditation—committee and commission review. These reviews provide the following information:

- an evaluation of a jurisdiction's emergency preparedness and response system against established national standards
- a structure for identifying areas in need of improvement and benchmarking progress

- a methodology for organizing strategic planning and corrective actions and accountability in prioritizing resources
- a catalyst for improved interoperability and continuity
- strengthened state, territorial, and local preparedness[24]

The standards used in emergency management are collectively called the EMAP Standard, and these are based on the National Fire Protection Association (NFPA) 1600 standards (recognized as the national preparedness standard for the private sector) and were developed by state, local, and federal emergency management practitioners.[25]

Disasters as a Field of Scientific Research

Copious scientific research has been dedicated to identifying the causes of hazard threats. As K. Smith offers, we define "hazard" cause as "a potential threat to humans and their welfare arising from a dangerous phenomenon or substance that may cause loss of life, injury, property damage and other community losses or damage," whereas risk, the likely consequence, is "the combination of the probability of a hazardous event and its negative consequences."[26]

Disaster research has been pursued in many disciplines and fields. Meteorology, seismology, volcanology, engineering, architecture, and a host of other fields routinely contribute scholarship to the study of emergency management. The social sciences, particularly through sociology, political science, and economics, have also contributed to knowledge creation in emergency management. Today, a wide array of institutes, research centers, and clearinghouses, many working through universities and colleges, conduct research that advances knowledge in disaster studies and emergency management.

Journals like the *International Journal of Mass Emergencies and Disasters, Natural Hazards Observer,* the *Journal of Contingencies and Crisis Management* (Europe), the *Journal of Emergency Management, Natural Hazards Review,* and the *Journal of Homeland Security and Emergency Management* (an e-journal) have been platforms for presenting new research in the field. The National Science Foundation (NSF), FEMA, the U.S. Army Corps of Engineers (USACE), the U.S. Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), the National Institute of Standards and Technology (NIST), and other federal agencies have contributed research and research support to the field of emergency management as well.

The United Nations sponsored the International Decade for Natural Disaster Reduction over the 1990s and has assigned emergency management study and work to several of its component offices and organizations (see Chapter 8). The Organization for American States, serving virtually the entire Western hemisphere, has taken a keen interest in emergency management and disaster research. The World Meteorological Organization serves as an umbrella organization linking meteorologists around the world. The World Health Organization (WHO) seeks to prevent the spread of disease globally and it, too, serves as a nexus of interchange for physicians and medical researchers worldwide.

Scientists now make daily contributions to emergency management. Earth observation satellites now track the advance of drought across West Africa. They make this information available to humanitarian relief organizations, which in turn preposition food supplies in storage facilities in communities likely to experience drought six months to a year in the future. National Aeronautics and Space Administration (NASA) satellite telemetry supplies U.S. Forest Service scientists with terrestrial data that make it possible for them to project the likely path of forest fires moving through mountainous terrain. The information they supply is used by smoke jumper teams to plan drop zone locations where the teams, once on the ground, can safely and effectively combat the advancing conflagration. USGS scientists staff tsunami research centers in Alaska and Hawaii that use deep ocean sensors and seismologic equipment to detect sub-oceanic earthquakes likely to trigger sea waves, referred to as tsunamis, capable of traveling thousands of miles across the Pacific, ultimately smashing coastlines where they strike. They quickly broadcast their findings to governments and news organizations to provide an alert or disaster warning. The National Severe Storm Center uses Doppler radar, among other technologies, to detect the formation of tornadoes. It then notifies the National Weather Service (NWS) and media organizations like the Weather Channel to forewarn people in the danger zones. Similarly, the National Hurricane Center tracks tropical depressions, tropical storms, and hurricanes wherever they occur in the world. Its ability to forecast points of likely hurricane landfall has done much to spur successful coastal evacuations and hurricane preparation.

Emergency management is usually associated with public service and government work. However, corporations have become interested in the field for many reasons. Insurance firms consider disaster probabilities in their models and calculations. Disasters and emergencies affect many lines of insurance, often in profound ways, such

that insurers have a vested interest in studying and promoting new ways to reduce disaster risk and loss. Virtually every business or corporation needs to consider how disasters and emergencies will affect their workers, their physical assets, their rates of production or service deliveries, and their profitability. Consider, for example, how Hurricane Katrina's impact on Gulf Coast oil platforms and onshore oil facilities affected U.S. and world oil and gasoline prices. Major "disaster industry" trade shows and exhibits are now common, demonstrating the growth of a disaster services industry. The private sector has been drawn to the products of disaster research and the services emergency managers are able to provide.

Presidential Disaster Declarations

Presidential declarations of major disaster or emergency are now so commonplace that they are becoming a routine mode of president-governor interchange. They are also evolving into a major conduit of interaction between federal, state, and local governments. Increased nationwide media coverage of disasters and emergencies of all types became the norm by the late 1980s.[27] This, along with other factors, may have discouraged presidents after Ronald Reagan from turning down gubernatorial requests for major disasters at the rate that earlier presidents did.

The rise of emergency management as a profession and changes in information technology have coincided with increased state and local administrative capacity to document disaster losses. In turn, this may be a factor in the greater number of presidential disaster declarations and subsequent policies and programs.[28] Improved disaster information management since the mid-1980s has aided FEMA in the past and the U.S. Department of Homeland Security (DHS) FEMA today, in ascertaining the worthiness of each gubernatorial major disaster declaration request sent to the president.[29] With advances in information technology, state emergency managers can document disaster loss more accurately through more expert damage assessments, and thus governors now have a stronger factual basis for requesting declarations of major disaster than they did earlier. In other words, governors have become better able to prove need before they request declarations.

Some disaster researchers have maintained that U.S. disaster policy is becoming more federalized, this ironically in an era of devolution and decentralization in many other realms of policy.[30] Counterterrorism initiatives may portend a complete nationalization of disaster management, but it is more likely that they indicate a much-expanded federal role in the intergovernmental relations of emergency management and disaster policy with the DHS counterterrorism mission paramount.[31]

Fundamental Challenges of Emergency Management

Emergency managers must face many challenges in crafting emergency management policies and programs and in responding to potential disasters. They need to understand the challenges of issue salience, fragmented government responsibility, and technical expertise.[32]

Issue Salience

Issue salience, or the importance of the issue to the public and to their elected leaders, is a perennial political problem of emergency management. Disasters are by their very nature high-risk, low-probability events. Their infrequency makes it difficult for responsible people to justify pre-disaster expenditures of money in view of seemingly more pressing, ongoing needs and issues. In the aftermath of major disaster, emergency managers, for a time, enjoy a high political profile and may be able to influence the public and their political representatives to undertake certain essential emergency preparedness or disaster mitigation efforts or projects. However, their salience is usually short-lived once the jurisdiction returns to normalcy.

Some mega-disasters, Hurricane Katrina for example, not only open a "policy window"[33] to allow new issues to move on to the government policy agendas but blow down walls, "and through the resulting hole" comes "a raging stream of policy proposals."[34] Policy windows represent the confluence of three separate streams: problem, policy, and politics. Policy windows represent periods when solutions are coupled to problems, and both solutions and problems are connected to favorable political forces.[35] Simply put, Hurricane Katrina was a compelling event in which pronounced problems occurred; various solutions were available to address the problems highlighted by the event; and the event propelled these problems and solutions to the top of the policy agenda, where political officials acted on them.

One way to measure issue salience is through public opinion polling. Disaster policy suffers from what is called the issue-attention cycle.[36]

This issue-attention cycle is rooted both in the nature of certain domestic problems and in the way major communications media interact with the public. The cycle itself has five stages, which may vary in duration depending upon the particular issue involved but which almost always occur in the following stages:

1. *The pre-problem stage.* This prevails when some highly undesirable social condition exists but has not yet captured much public attention, even though some experts or interest groups may already be alarmed by it. Usually, objective conditions regarding the problem are far worse during the pre-problem stage than they are by the time the public becomes interested in it.[37] For example, this was true of the U.S. vulnerability to terrorist attacks before 9/11, despite the bombing of the World Trade Center by terrorists in 1993. America's coastal vulnerability to hurricanes was understood by many experts before 2005 but poorly appreciated by the public until Hurricane Katrina and the failures of the levees protecting New Orleans and neighboring communities. Similarly, hundreds of thousands of people residing in New Jersey or New York and who lived on barrier islands or in highly urban low-lying coastal areas may have discounted or disregarded the possibility of a tropical storm's massive storm surge in October 2012.

2. *Alarmed discovery and euphoric enthusiasm.* As a result of some dramatic event (like Hurricane Katrina in 2005, the 9/11 terrorist attack, the British Petroleum (BP) Deepwater Horizon oil spill of 2011, or Superstorm Sandy of 2012) or for other reasons, the public suddenly becomes both aware of and alarmed about a particular problem. This alarmed discovery is invariably accompanied by euphoric enthusiasm about society's ability to "solve this problem" or "do something effective" within a relatively short time. There is strong public pressure in America for political leaders to claim that every problem can be solved. This outlook is rooted in the great American tradition of optimistically viewing most obstacles to social progress as external to the structure of society itself.

   The implication is that every obstacle can be eliminated and every problem solved without any fundamental reordering of society itself, if only we devote sufficient effort to it. In some cultures, an underlying sense of irony or even pessimism springs from a widespread belief that many problems cannot be "solved" in any complete sense. In American social and political culture, pessimism about seemingly intractable problems like disaster is on the rise, but nevertheless, after every major disaster most Americans expect, and often demand, that government officials do something to address the disaster and its causes.[38]

3. *Realizing the cost of significant progress.* The third stage consists of a gradually spreading realization that the cost of "solving" the problem is very high indeed. Really doing so would not only take a great deal of money but would also require major sacrifices by large groups in the population. The public, thus, begins to realize that part of the problem results from arrangements that are providing significant benefits to someone—often to millions. For example, Americans realize it will cost huge sums of money and vast resources to rebuild Louisiana levees to withstand a Category 5 hurricane. They may also come to understand the high cost of replacing Louisiana's vanishing wetlands, a major coastal defense against hurricane storm surge. However, Americans, especially many Gulf Coast residents, are likely to insist on resettling the same hurricane-vulnerable damage zones they occupied before. They will demand that all of the public infrastructure they relied on before the hurricane be rebuilt in virtually the same exact location as before. Similarly, in 2012 the governors of New Jersey and New York championed rebuilding, fueled by billions in federal funding, along still highly flood-vulnerable, low-lying coastal areas pounded by Superstorm Sandy.

In certain cases, technological progress may eliminate some of the undesirable results of a problem without causing any major restructuring of society or any loss of present benefits by others (except for higher money costs). In the optimistic American tradition, such a technological solution is initially assumed to be possible for nearly every problem. Our most pressing social problems, however, usually involve either the exploitation, whether deliberate or unconscious, of one group in society by another or the prevention of one group from enjoying something those others want to keep for themselves.[39] For example, before Hurricane Katrina struck in 2005 many of those who lived along the Gulf Coast in hurricane-vulnerable zones and who had the means to purchase national flood insurance to protect their homes but elected not to buy it nevertheless demanded that the national taxpayer bail them out through generous disaster relief. Correspondingly, development policy, both national and state, gave priority to dredging the Mississippi River and maintaining canal and channel navigability in the interests of commerce and water freight in the lower Mississippi and around New Orleans. This came at the expense of levee protection and wetland preservation that would have mitigated some of Katrina's devastating effects. There was in fact a trade-off between economic priorities and public safety.[40] The increasing recognition that this type of relationship exists between the problem and its "solution" constitutes a key part of the third stage.

After Post-Tropical Superstorm Sandy, officials of the Port Authority of New York and New Jersey (PATH) went to work devising various technological fixes that might prevent flooding of its auto and train tunnels in Lower Manhattan. Many of the proposed "fixes" are colossally expensive: building a storm surge barrier with retractable doors spanning the Hudson River near the Verrazano Bridge; surrounding Lower Manhattan with a tall break wall; and perhaps most feasible, fabricating giant end-of tunnel plugs that might act like temporary stoppers in a sink when the waters rise again.

4. *Gradual decline of intense public interest.* The previous stage becomes almost imperceptibly transformed into the fourth stage: a gradual decline in the intensity of public interest in the problem. As more and more people realize how difficult, and how costly for them, a solution to the problem would be, three reactions set in. Some people just get discouraged. Others feel positively threatened by thinking about the problem, so they suppress such thoughts. Still, others become bored by the issue. Most people experience some combination of these feelings. Consequently, public desire to keep attention focused on the issue wanes. And by this time, some other issue is usually entering stage 2, so it exerts a more novel and thus more powerful claim upon public attention.[41]

5. *The post-problem stage.* In the final stage, an issue that has been replaced at the center of public concern moves into a prolonged limbo—a twilight realm of lesser attention or spasmodic recurrences of interest. However, the issue now has a different relation to public attention from that which prevailed in the pre-problem stage. For one thing, during the time that interest was sharply focused on this problem, new institutions, programs, and policies may have been created to help solve it. These entities almost always persist and often have some impact even after public attention has shifted elsewhere.[42] For example, the president and Congress established a Gulf Coast Recovery Authority to help victims of hurricanes Katrina and Rita recover from those 2005 disasters. Billions of federal dollars are flowed to the region through a variety of federal and state programs, just as has happened in the Sandy disaster recovery. People have come

to believe that the problem of hurricane vulnerability is being addressed. As other problems come to the fore, disaster preparedness tends to draw less news media, public, and policymaker attention.

Any major problem that once was elevated to national prominence may sporadically recapture public interest, or important aspects of it may become attached to some other problem that subsequently dominates center stage. Therefore, problems that have gone through the cycle almost always receive a higher average level of attention, public effort, and general concern than those still in the pre-discovery stage.[43]

Fragmented Government Responsibility

Fragmented government responsibility is a political challenge for disaster managers. The United States has a highly decentralized, federal system of government, which under the U.S. Constitution affords the national government a range of authority. Some powers are reserved for the states under the Tenth Amendment. Similarly, in some states, local governments, although legally vestiges of their respective state government, possess certain powers under home rule provisions approved by their states, by their state constitution, or through enabling statutes. The federal system of layers of governments creates a form of vertical fragmentation among national, state, and local governments.

Moreover, there is also horizontal fragmentation, owing to a multitude of competing agencies with overlapping jurisdictional prerogatives on each level of government. Effective decision making and program coordination among all these agencies is difficult in the extreme. Here is one view of the system:

> Disaster relief is a system of complex and interdependent programs that work well most of the time. When it succeeds, the disaster relief system does so not because of the inspired operational leadership at the federal level, but because it is a system whose pieces have been built beforehand, over time in response to public preparedness policies, state and local government initiative, and private sector response to market incentives and regulation, as well as the dedication of private voluntary organizations, and the acumen of individuals and families.[44]

This underlines the need for multiagency and multijurisdictional coordination concerning emergency and disaster issues. The National Response Plan (NRP) was, and its replacement the National Response Framework (NRF) is, predicated on the need for such coordination. The National Incident Management System (NIMS), as this study will show, represents the epitome of multiagency and multijurisdictional coordination when a response to a major disaster or emergency is necessary.

Vertical fragmentation occurs when federal, state, and local officials fail to coordinate their respective actions with one another. For example, this happens when federal officials act independently or without consultation of their state and local counterparts. It may also occur when local or state officials fail to act in concert or when one or more fails to properly apprise federal authorities of their actions. The over-centralization of decision making on the federal level, so often alleged by state and local emergency managers and their professional organizations, also promotes vertical fragmentation.[45]

Disaster policy and emergency management both inherently involve intergovernmental relations. Intergovernmental relations involve the interaction and exchanges of public and private organizations across all layers of government. The growth of societal interdependence, in economic and technological terms, has created a webbed and networked world that depends on both the support and regulation of government.

The major power blackout suffered by the Northeast in the summer of 2004 stemmed in part from inadequate tree pruning around the power lines of a small private electric utility in northeastern Ohio. A cascade effect was produced that knocked down huge portions of the power grid of New York State, Ohio, and Pennsylvania. Millions were without power for a period of several days. To rectify the problem, private and public utilities had to cooperate and rebuild portions of the grid, and power pool managers (those who manage the flow of electricity from utility to utility and over a regional power network) had to work in synchronization; state and local emergency managers meanwhile had to swing into action to direct traffic when no signals operated, rescue people trapped on elevators, and work with public and private nonprofit social welfare agencies, making sure people would not die of heat stroke in their un-air-conditioned residences. The Federal Energy Regulatory Commission (FERC) launched months of investigations. FERC sought to ascertain the source of the outage and to determine liability for costs of the power failure. The president even issued disaster declarations to New York, Ohio, and Pennsylvania, among other states. How could inadequate tree pruning in Ohio produce such dire consequences?

The answer is "tightly coupled interdependence."[46]

Communities of Stakeholders

Emergency management has various communities of stakeholders. Stakeholders are persons, groups, or institutions with interests in a project, program, or policy. Primary stakeholders are those ultimately affected by the policy or program, either positively or negatively. Key stakeholders are those who can significantly influence, or are important to the success of, the policy, program, or project. Stakeholders with political clout have often been influential in determining which state or local agency has lead jurisdiction during emergencies and disasters. In some states and localities the political power of paid or volunteer fire service people, a key stakeholder group, dominates emergency management. In some states and localities, law enforcement agencies have been entrusted with emergency management authority and responsibilities. In some local governments, the medical community, another key stakeholder, has assumed lead jurisdiction in emergency management through the services it provides in public and private hospitals and emergency medicine. In about half of the states top emergency management is a quasi-military responsibility led by the state adjutant general, an official who heads the state's National Guard. Because National Guard units are under the control of governors in each respective state, adjutant generals often have close working relationships with their respective state governor.

State and local governments have moved into the realm of disaster policy and emergency management in different ways. Through the 1950s and 1960s, some have nurtured emergency management as an extension of their civil defense work. Others, which have had poor experience with previous disasters—often with highly negative political repercussions for those in office—have moved emergency management closer to the executive realm. In some localities disaster management was a political football fought over by police and firefighters, both of whom wanted primary jurisdictional authority in emergency and disaster circumstances. Some of the common concerns of emergency managers and stakeholders active in disaster recovery are presented in Table 1-1.

Table 1-1 Common Needs of Stakeholders and Participants in Disaster Recovery

Stakeholders	Immediate and long-term needs
Individuals and families	Housing Restoration of employment Health and welfare Restoration of schools and other educational facilities
Business and industry	Reconstitution of business, business recovery Rehiring of workers Insurance supplementation or coverage of uninsured losses Business altruistic activity
Communities and local government	Restoration of utilities and lifeline services Support of nonprofit charitable organizations Infrastructure repair and replacement Supervision of local recovery Debris removal

	Post-disaster planning
State and federal government	Repair or replacement of state-owned infrastructure or facilities
	Repair or replacement of federally owned infrastructure or facilities

Source: George D. Haddow and Jane A. Bullock, *Introduction to Emergency Management,* 2nd ed. (Boston: Elsevier, Butterworth-Heinemann, 2006), 136–140.

Who has Jurisdiction over Emergency Management?

Until the Rudolph Giuliani mayorship in the mid-1990s, New York City emergency management was led by the New York City Police Department (NYPD) for many years. Giuliani carried out a reorganization that took the city's Office of Emergency Management away from the NYPD and made it an arm of his executive office some two blocks away from the World Trade Center. In a referendum held in late 2001, voters overwhelmingly approved elevating the mayor's Office of Emergency Management to independent status. In 2002, under Mayor Michael R. Bloomberg, the agency was relaunched as the New York City Office of Emergency Management and headed by a commissioner who reports to the mayor. In 2006, the New York City Office of Emergency Management moved to a new headquarters at Cadman Plaza in Brooklyn. Why all of these machinations? In New York City, several city departments, more specifically the Fire Department of New York (FDNY) and the NYPD, have long fought for leadership control of city emergency management. As in most municipalities, the mayor of New York relies heavily on emergency managers. Mayors need notification about local emergencies and disasters for at least two reasons. First, certain emergency circumstances require mayor-level executive decisions. Second, owing to the newsworthiness of local disasters and emergencies, mayors need to be apprised of these events at least as early as the news media. In emergencies and disasters, the mayor's public image may be at stake. Moreover, a mayor is the personification of the municipality she or he leads, and people expect their mayor to respond to the calamities their city experiences.

Jurisdiction over some realms of emergency management is occasionally a subject of bureaucratic and political conflict. Government reorganizations are often manifestations of ongoing "battles" between different leaders, public departments, agencies, and offices. Sometimes emergency management is the object of reorganization. State and local emergency management involves so many different subjects and concerns that seldom can a single state or local government agency claim complete dominion over it. This, too, adds to political and administrative disputes over who will have control of what in emergency management. The post–9/11 emergence of homeland security, introduced with relatively massive levels of federal funding, triggered waves of state and local reorganization—much of it involving emergency managers and emergency management.

Local Governments and Decentralization Issues

Disasters are usually localized geographically. Therefore, county and municipal authorities most often assume primary responsibility for emergency management. However, the policymaking, administrative, and fiscal capacity of many local governments is often questionable. Owing to competing demands and cross-pressures, many local officials are reluctant, unwilling, or unable to design, implement, and support effective disaster preparedness and response programs. As mentioned previously, vertical fragmentation transpires when federal, state, and local authorities fail to coordinate their emergency management responsibilities, when they act independently of one another, when they duplicate their efforts or work at cross-purposes, or when one level of government fails to carry out its obligations. The NRP, officially put into effect in the spring of 2005, was supposed to prevent vertical fragmentation. Moreover, the plan was supposed to establish a system to help the nation manage "incidents of national significance," whether caused by terrorism or natural disaster (see the "How Things Work" box).

Horizontal fragmentation may be reduced if adjacent or nearby states and local jurisdictions establish mutualassistance agreements with one another "before" disasters and emergencies transpire. These agreements alleviate some of the jurisdictional confusion. Vertical and horizontal fragmentation complicates emergency management. Such fragmentation is not easily overcome even though "shared governance" holds some potential for achieving improvements in emergency management.[48] Vertical and horizontal fragmentation often contributes to the problems of insufficient technical expertise, inadequate fiscal resources, and unclear legislative mandates.

Over the past three decades, decentralization in government has become a mantra of political leaders, regardless of political party. Decentralization, with sound coordination, is how many authorities define successful emergency management. As noted earlier, emergency management has fundamentally been a local obligation, often undertaken with the help of private charitable organizations. However, local governments in most states are either considered "creatures" of their states or they are accorded certain "independent powers" by their states, sometimes under "home rule" laws or policies. States themselves enjoy limited areas of "reserved powers" under the U.S. Constitution, but the range of federal powers over the states is vast. Thus, although many people consider emergency management a "bedrock" local responsibility, both the state and the federal government are now actors, often with public endorsement, in local emergency management. Simply put, local officials may have recognized their own limitations in addressing disaster, local officials may have become accustomed to state and federal assistance after disasters, and local officials may have come to recognize their dependence such that the coordinated help of state and federal authorities is today ordinarily welcomed.

Federal and state policymakers and public managers often cannot easily grasp the emergency management organizational complexity of some 3,500 county governments and thousands more municipal and special district governments. In fashioning disaster policy, federal and state authorities have endeavored to promote where possible consistency and, to a degree, professionalism in local emergency management. Part of this effort is evident in all-hazards emergency management. The essence of this concept is that common sets of emergency preparedness and response procedures and practices are applicable in any locality regardless of differences in geography or demography. It is also assumed that an economy of scale can be reached by planning and preparing for disaster in generic terms (thus, "all hazards") rather than by planning or preparing for each unique type of disaster.

Disaster management also requires strong cooperation and coordination among public, nonprofit, and private organizations. Emergency management is conducted in a fluid and often chaotic environment. Local government officials must interact ably with other local government officials and with people representing private or nonprofit organizations. A county government may offer assistance under a previously arranged mutual aid agreement. Private construction companies that have experience in meeting building code rules may offer emergency rebuilding or repair assistance. Area chemical companies may volunteer their services to clean up and detoxify hazardous substances accidentally released during the disaster. A host of local, state, or national charitable organizations may offer human services aid that local governments cannot. Help from the private and nonprofit sectors often augments successful emergency management, sometimes meeting needs or filling gaps that government is unable to address fully.

Disaster management recognizes the need to consider the types or categories of disaster. Each one of the different categories of disaster embodies different types of duties and responsibilities for disaster managers. These duties and responsibilities are not always compatible across categories of disaster incidents. For example, a terrorist attack, such as what occurred on September 11, 2001, mobilized fire service personnel, police officers, emergency managers, law enforcement officials, military personnel, and many others. The sites attacked were a scene of human disaster, a crime scene, and of high national security interest. Search and rescue, public safety, firefighting, crime scene investigation, forensic and coroner work, all had to be pursued at the same site. In such situations, conflicts are likely to occur over who is to do what and when.

Similarly, a coastal flood, such as the flooding that often occurs after nor'easters in New England and along the Mid-Atlantic, may be a human disaster and an environmental issue. Some authorities will press for rebuilding damaged onshore structures or replenishing lost beach sand, whereas others will seek to protect natural habitats and coastal marine resources by discouraging rebuilding and instead recommending ways to accommodate the changes produced by the storm. Different types of disasters embody different sets of concerns, political issues, authority, and jurisdiction.

Political Aspects of Disaster

Disasters have political features. Natural disasters and emergencies, in particular, provide excellent windows of opportunity for public officials.[49] Often these officials use disasters or emergencies to demonstrate their leadership capabilities and their willingness to tackle difficult problems. Their actions on these occasions usually draw media publicity and instant public notice. Moreover, it is extremely difficult to oppose or criticize an official who steps in and gives the appearance of taking charge in order to help disaster victims.

Natural disasters also produce conditions that allow political leaders to show their concern for citizens' needs and demands. Disaster victims often encounter problems that they have never before experienced and which they may be unprepared or ill equipped to handle on their own. Public officials are in a position to highlight needs and channel resources to help those in distress. Disaster gives elected or appointed leaders a perfect opportunity to demonstrate their responsiveness to the needs of the people.

History's Lessons: The Matter of Disaster Insurance

Owing to a 1958 study by the geographer Gilbert F. White[53] and his colleagues titled "Changes in Urban Occupancy of Flood Plains in the United States," and due to the public education and advocacy efforts of White and others, many policymakers and others were made aware that land-use pressures and the failure to keep development out of potential flood zones were putting more people and structures in jeopardy.[54] The study even alleged that a condition of moral hazard was emerging because post-flood federal disaster relief led many people to believe that should flood disaster occur, the federal government would be there to set things straight. Moral hazard in the realm of insurance refers to an increase in the probability of loss caused by the behavior of a policyholder.[55]

Another way to look at this is that federal disaster assistance does the following:

> Creates a type of Samaritan's dilemma: providing assistance after a catastrophe reduces the economic incentives of potential victims to invest in protective measures prior to a disaster. If the expectation of disaster assistance reduces the demand for insurance, the political pressure on the government to provide assistance after a disaster is reinforced or amplified.[56]

By 1960, the final year of Eisenhower's presidency, Congress had amended the Flood Control Act and authorized the USACE to compile and disseminate information on floods and flood damages at the request of a state or responsible local agency. As a result of the act, the USACE established a Flood Plain Management Service, a body that promoted flood mitigation and supplied advisory flood maps to local communities.

One of the reasons that the National Flood Insurance Program (NFIP) was established in 1968 was to encourage individuals who resided in hazard-prone areas to purchase flood insurance. The insurance was low priced—remember, a government insurance program is not necessarily required to show a profit—and policymakers hoped that the availability and low cost of this insurance would reduce the need to supply so much federal disaster grant and loan assistance after future floods. However, after this occurred, the following happened:

> [F]ew individuals voluntarily bought this coverage so that when Tropical Storm Agnes in June 1972 hit the Northeast causing over $2 billion in damage, only 1,583 claims totaling $5 million were paid under the NFIP. Even though flood coverage has been required since 1973 as a condition for a federally insured mortgage, it has been estimated that less than 40 percent of the victims of Hurricane Katrina in Mississippi and Louisiana had flood insurance to cover their losses.[57]

By 2012, the total number of NFIP policies in effect for the calendar year exceeded 5.6 million, up from 1.9 million in 1982, 2.6 million in 1992, and 4.5 million in 2002.[58]

Disasters may create tremendous opportunities for elected officials to provide service to their constituents. Government leaders who successfully address disaster-related problems are likely to be rewarded politically, whereas those leaders who are unwilling or unable to act may suffer negative political repercussions.[50]

Disasters embody "political dangers" for elected executives and for senior public managers. Bungle a disaster and political executives will pay a political price. Perceived incompetence during disasters often comes at a high price for political officials.[51]

The Problem of Disaster Insurance

It became apparent to policymakers as early as the 1950s that private sector insurance companies were either unwilling to provide residential insurance against flood or incapable of doing so. This created a major unmet need in several respects. Federal disaster relief programs only gradually came to extend relief directly to individuals and families, and much of this relief was at the time wholly inadequate to help victims who suffered losses from flooding or from any other disaster agent (see the "History's Lessons" box).

A massive share of presidential disaster declarations from 1950 to 1980 covered flood disasters—many associated with hurricanes, tornadoes, and severe storms. Presidents and lawmakers seemed constantly to revisit the problem of inadequate help for those individuals and families suffering flood loss.[52]

Presidents and Congress slowly and haltingly moved toward the creation of the NFIP, which would invite localities to join if they promised to meet federal standards aimed at limiting development in flood-plains and promoting flood-proof construction. People living in the communities that joined the NFIP would then be eligible to buy relatively low-cost flood insurance from the federal government. In effect, the federal government would use insurance as a key form of disaster assistance and as a tool of flood mitigation.

The NFIP was supposed to be a premier instrument of both disaster mitigation and disaster recovery. The program that continues today has been modestly successful. Many local governments participate in the program and generally abide by its flood mitigation rules. Through the years, however, NFIP has only weakly penalized localities that disregarded its rules, owing to understaffing and limited authority to punish noncompliant local governments. Worse still, too few property owners purchase and maintain NFIP policies. People who refuse to buy national flood insurance, even those who experience recurring flood loss through the years, are rarely denied federal disaster relief after a federally declared flood disaster damages their property, though this may be changing under provisions of the National Flood Insurance Act of 2012.

On top of all of this, private insurers continue to cover wind damage (but not that caused by floodwater) in their homeowner insurance policies. NFIP covers floodwater damage but not wind-caused damage. There is a "wind" versus "water" dispute between FEMA and private insurers that does not serve policy-holder or public interests. Consequently, many homeowners have fallen into insurance limbo as private insurer claims adjusters contest claims for damage they believe is caused by flooding, and NFIP claims adjusters deny claims for damage they conclude was caused by wind. For example, a vast number of NFIP policyholders in Katrina damage zones ended up having their claims denied by both NFIP and their private insurer. At this writing, this insurance "policy" failure remains unresolved, and such disputes are commonly fought out in the courts.

Technical Expertise

Emergency management is conducted within a complex political, economic, and social environment. In part, this explains why emergency management has so long lacked a coherent, coordinated policy framework. Designing and implementing comprehensive emergency management procedures is easier said than done, principally because of the obstacles to effective action created by problems stemming from low political salience, fragmented government responsibility, and lack of emergency manager technical expertise.

Lack of technical expertise and confusion about the kind of expertise that is needed is another major impediment to effective emergency management. The technical expertise needed to identify and assess hazards adequately, predict the occurrence of disasters, and provide the requisite technical information for the design and implementation of effective programs is crucial to effective emergency management. Moreover, even when hazards have been identified, it is often unclear just how much risk is involved. In bygone eras, emergency management required little technical knowledge or expertise when compared with many other occupational specialties.

Today, emergency managers need to master a specialized body of knowledge, often involving many different disciplines. Accounting and budgeting skills are important. Public relations expertise and political savvy are necessary. Computing ability, for information management, decision support, geographic information system (GIS), social media,[59] and so on, has become more a part of routine emergency management work. A working knowledge of disaster-related laws and programs is vital. The FEMA Emergency Management Institute regularly conducts conferences and workshops that examine the knowledge, skills, and abilities needed to do emergency management.[60] There is a growing consensus about the general skill sets needed. A substantial list of institution-based and online courses is available today. EMAP, a private voluntary consortium, has been working to set forth qualifications and credentials needed for a person to be classified as a "qualified emergency manager."[61] A great many universities and colleges offer course work and degrees or certificates in emergency management.[62]

Decision making in disaster planning and management encompasses the following assumptions.

- Disaster planning is a continuous process. It should not be based on a single emergency but instead on several. Such planning must allow for the constant incorporation of new findings.
- Disaster planning should attempt to reduce uncertainty in crises by anticipating problems and projecting possible solutions.
- Disaster planning stipulates that the appropriateness of response is more important than speed of response.
- Disaster planning is based on what will probably happen; procedures need to address what people are likely to do in emergencies, not on myths or common nostrums about human behavior.
- Disaster planning involves the education of response and recovery people. They need to know that emergency procedures exist and that it is important that they understand and follow these procedures.
- Disaster management needs to be "sold" effectively to communities to be taken seriously.
- Disaster management requires exercises and practice, or otherwise the best plans tend to become worthless.

Phases of Emergency Management

The four phases of emergency management encompass mitigation, preparedness, response, and recovery. It makes sense to divide recovery itself into two phases: short- and long-term. A major reason for this is because short-term recovery often involves addressing immediate needs, which tend to be quite different from needs associated with long-term recovery. Short-term recovery may overlap some of the disaster response phase. It routinely includes, "search and rescue, damage assessments, public information, temporary housing, utility restoration, and debris clearance."[63] Moreover, the people and organizations that tend to address short-term recovery over time begin to be replaced or supplanted by a much broader pool of people and organizations in long-term recovery. Long-term recovery, "addresses the basic dimensions of a community's existence: permanent housing, economic conditions, the environment, the infrastructure (e.g., roads and bridges), and lifelines (e.g., water, power, telephone service)."[64] Each dimension of long-term recovery may be affected by social and psychological conditions that impact individual and group ability to advance through the long-term recovery period.

Mitigation

Mitigation involves deciding what to do where a risk to the health, safety, and welfare of society has been determined to exist and then implementing a risk reduction program. It is sustained action to reduce or eliminate risk to people and property from hazards and their effects. The recovery phase of disaster also offers opportunity for mitigation actions.[65] In addition, mitigation may also be any cost-effective measure that will reduce the potential for damage to a facility from a disaster event. This includes identifying, measuring, and addressing hazard vulnerability; more and more often, it also includes activities undertaken after a disaster to lessen the likelihood of future disasters from both physical and social phenomena that are potentially dangerous.[66]

The formation of FEMA spotlighted the significance of hazard mitigation and preparedness, and by the 1990s FEMA gave impetus to a proactive, rather than a reactive, approach to emergency management. Instead of merely doing disaster recovery work, FEMA emphasized keeping people out of hazard-prone, high-risk areas through instruments such as zoning laws, building codes, and land-use regulations. In effect, FEMA began to encourage or induce local officials and individuals to adopt mitigation policies.[67] Mitigation work opened up a perennial, highly political difference of opinion between FEMA and various local officials, developers, and citizens.[68] As subsequent chapters explain, federal efforts to promote local disaster mitigation activity, especially through grant conditions and NFIP requirements, often ran afoul of local economic development interests, who objected with accusations that the federal government was interfering with local land use and building code powers. FEMA officials attempted to persuade community people to proactively protect themselves through hazard mitigation activities.

Tools for mitigation include the following:

- Hazard identification and mapping (e.g., by the NFIP, the USGS, the states, GIS, Hazards U.S.-Multi-Hazard [HAZUS-MH] software program)
- Design and construction applications (e.g., code development, model codes, geographic sensitivity, retrofit ordinances, elevation of homes, removal of flammable vegetation around homes, landscaping)
- Land-use planning (prevents development in floodplains or high-hazard zones, relocates structures), zoning rules, property acquisition
- Financial incentives (special tax assessments in the interest of mitigation or relocation aid), use of other federal program monies to pay for property acquisition and relocation
- Insurance (e.g., NFIP, federal subsidization of some other forms of insurance, such as terrorism insurance), indemnification requirements as a condition of loan approvals by the U.S. Department of Veterans Affairs (VA), the U.S. Department of Housing and Urban Development (HUD), or the Federal Housing Administration (FHA), or other federal mortgage aid. The federal government provides insurers with maps of high-hazard zones. The Community Rating System rewards good performers with lower NFIP premiums for their people.
- Structural controls (e.g., public works, flood works, levees, dams, flood channels, shoreline structural protection)[69]

Preparedness

Preparedness involves developing a response plan and training first responders to save lives and reduce disaster damage, identifying critical resources, and developing necessary agreements among responding agencies, both within the jurisdiction and with other jurisdictions. Preparedness also entails "readying for expected threats, including contingency planning, resource management, mutual aid … [and] public information."[70] It is a functional aspect of emergency management that contributes to sound emergency response and recovery from a disaster.

Emergency management has to rely on academic or analytical processes, especially those resting on a systems approach to management. Preparedness relies heavily on a systemic conceptualization. Some of the standards flow from The EMAP Standard. many are based on the NFPA 1600 standards (recognized as the national preparedness standard for the private sector domestically and internationally) and were developed by state, local, and federal emergency management practitioners.[71]

Response

Response entails providing emergency aid and assistance, reducing the probability of secondary damage, and minimizing problems for recovery operations. In an emergency situation, emergency managers rarely direct actual response operations. There are exceptions, as when management of a crisis falls to a senior elected official or to the lead emergency services agency.[72] Disaster response objectives include protecting lives, limiting property loss, and overcoming the disruptions that disasters cause.[73] The response phase of disaster is often the most dramatic, visually stunning, and newsworthy phase of the disaster cycle.

Recovery

Recovery involves providing the immediate support during the early post-disaster period necessary to return vital life-support systems to minimum operational levels and continuing to provide support until the community returns to normal.[74]

Recovery is the most expensive phase of the disaster cycle. It involves restoration, rebuilding, and return to normalcy. The pool of players involved in recovery is huge and far exceeds the number of players usually involved in disaster response. Late stages of disaster recovery may involve only relatively small numbers of emergency managers. Decisions regarding disaster recovery are fundamentally made at the local level of government.[75]

Summary

In several respects, disasters are socially and politically constructed phenomena. Who could imagine that the influx of Cuban immigrants from Fidel Castro's Mariel boatlift in 1980 would induce President Jimmy Carter to issue a disaster declaration for this event? How could the breakup of the NASA space shuttle *Columbia* in 2003 cause President George W. Bush to use his disaster declaration powers to grant governors in states suspected to be in the shuttle's debris zone reimbursement of the costs related to their shuttle disaster response? As Chapter 4 will demonstrate, presidents have at times used their power to declare disasters in ways that have expanded the definition of disaster in political and public administrative terms.

Disasters sometimes cause major shifts in national priorities and significant changes in other policy domains. The August 2007 collapse of the Minneapolis area I-35W Mississippi River Bridge, a dramatic infrastructure disaster, impelled national policymakers to shift a portion of federal defense spending to the replacement, repair, and improved maintenance and inspection of the nation's bridgeworks.[76] The 9/11 terrorism disaster induced policymakers to move federal emergency management into a holding company of agencies implementing policies ranging from immigration control, border security, coastal maritime work, aviation security, public health, domestic intelligence collection, right up to Secret Service protection of government leaders.

This chapter examined the essentials of emergency management and disaster policy. It covered emergency management as a profession. It explored stakeholder groups in the domain of disaster policy. It also furnished a brief overview of disaster as a field of scientific research, something examined more thoroughly in Chapter 5. Additionally, the chapter outlined some of the major challenges facing both emergency management and emergency managers. Among these challenges are the perennial low issue salience of disaster as a public and political phenomenon, the fragmentation of government responsibility for disaster-related concerns, the difficulties local governments face in addressing emergency management, the political aspects of the disaster phenomenon, the problem of disaster insurance, and the challenge of training and educating emergency managers for a field that is technically complex and highly multidisciplinary. It provided a cameo of the four-phased cycle of emergency management: mitigation, preparedness, response, and recovery. These essentials will be developed more fully in subsequent chapters. Disaster policy and politics are intriguing, controversial, teachable, complex and yet largely comprehensible, and constantly growing in importance.

Key Terms

Chapter 2 Disaster Management and Theories of Public Policy and Management

A Fema Representative Asks Lori Faillaci, Left, about Heat and Power Availability January 17, 2013, in the Rockaways of Queens, N.Y. The Neighborhood Suffered Flooding and Storm Surge Damage from Tropical Storm Sandy in Late October 2012. A $50.7 Billion Superstorm Sandy Federal Aid Package was Made Law in January 2013. The Funding is being Spent Largely on Repairing New York and New Jersey Transit Systems and for the Federal Emergency Management Agency's Disaster Relief aid to People who Sustained Property Damage and other Eligible Losses in the Disaster.

(Source: Photo by Robert Nickelsberg/Getty Images.)

SCHOLARS HAVE DEVELOPED THEORIES AND CONCEPTS TO HELP them and us understand and explain governance and public policy generally. Theories and concepts have also been used to help understand and explain specific domains of public policy, such as health care, social welfare, environment, defense, and education. Disaster policy, although a relatively new domain of public policy, is also amenable to analysis through the development and application of theories and concepts. Theories and concepts often serve as tools one can apply to the study of specific subjects or problems.

As emergency management is evolving into a profession, we must rely on theories, concepts, and abstract knowledge as well as experiential learning and experimental research. Emergency management as an occupation

increasingly demands the mastery of a body of professional knowledge, although it also depends on the skills and abilities of generalist managers. To understand their role in the policy process and to establish their profession, emergency managers need to grasp the significance of political and managerial theories relevant to their work.[1] They need to appreciate that government embodies actors and structures intended to facilitate the effective operation of democracy and political accountability.

This chapter provides a sampling of theories and concepts, many produced by political scientists, public administrationists, sociologists, and economists, applicable to the domain of disaster policy and to the field of emergency management. It also provides an overview of how and where theory knowledge fits in the evolution of emergency management as a profession and supplies some insight about how people new to the field can use theories and concepts to independently analyze disaster policy as a domain of public policy.

The chapter begins with a discussion of three relatively simple normative theories: Jeffersonian, Hamiltonian, and Jacksonian. Matters of bureaucratic politics and administrative culture are then considered. From there it moves on to a look at the role of "best practice" contributions to the field. Intergovernmental relations theory is touched upon, followed by a brief examination of the relevance of principal-agent theory in disaster policy implementation. Included as well is a brief introduction of network theory, a longer examination of disaster recovery theory, and finally a short summary of complexity theory. After this is a special topics review of the new public administration approach and a brief discussion about how emergency management knowledge is produced and how it is learned by others.

Normative Political Theories

Consider three simple normative political theories that emanate from the political contributions of three important U.S. forefathers: Thomas Jefferson, Alexander Hamilton, and Andrew Jackson.[2]

The Jeffersonian Model

Jefferson, the major author of the Declaration of Independence and the nation's third president, has been generally understood to insist that the job of public managers was to try to obtain "popular and stakeholder guidance" through political consultation or public deliberation before the fact. In other words, public managers should make their decisions as the product of grassroots public consultation and the consensus of interest group recommendations. This gives a public manager's decisions greater legitimacy for public purposes.

This so-called Jeffersonian approach requires that public managers possess not only skill in consultation, negotiation, and communication but also deftness in probing for public understanding and consent. Good Jeffersonian public managers are educated generalists (gentlemen [or gentlewomen], as Jefferson might put it) who know and understand personal relationships that exist between agents (workers) and their assigned tasks (their duties). Jeffersonian public managers are strictly accountable to the public and to their elected overseers. As communities bear the effects of a disaster, Jeffersonian managers must use their sociotechnical skills to meet the expressed needs of those in their communities. Strong community participation would be a hallmark of emergency preparedness and planning for Jeffersonian emergency managers.

Recent thinking about emergency management indirectly stresses the importance of Jeffersonian behavior at the local government level. One scholar's explanation of what emergency managers do captures the Jeffersonian approach superbly well:

> Emergency managers are public servants who help communities prevent and prepare for disasters. They issue warnings, oversee evacuation, and communicate with responders. They also assemble statistics on damages, share disaster knowledge with citizens through the media, and work with those in charge of shelters. Emergency managers also acquire resources. They make sure that departments are working together to address response and recovery challenges. They gather information about expenses. They help determine response and recovery priorities. Their contributions are crucial to post-disaster operations.[3]

Local emergency managers must serve local executives and at the same time respond to the needs of people in their jurisdiction. Should they fail badly on either or both counts, they risk losing their posts and they risk harming the reputation and welfare of their agencies. However, to most elected and appointed officials who control budgets and staffing allocations, emergency management is a low priority. One study quotes a police chief emergency manager as saying the following:

> My number one priority is getting the uniforms out to response calls. The public judges me on that performance, not whether I'm planning for an earthquake that may never happen. If left alone, disaster planning would get even less attention from my office. It requires that the executive clearly make this a priority.[4]

Thus, for Jeffersonian emergency managers, their work and the success of their agencies reside in maintaining community support from senior elected and appointed officials, the news media, and the public.[5] Local emergency managers often rely on local emergency management committees (LEMCs) or local stakeholder groups. An LEMC is a disaster-planning network that increases coordination among local agencies.[6] LEMCs succeed when they effectively receive and respond to community information requests, when they establish and maintain good working relationships with people of the news media, when they earn and maintain local support, and when they retain the confidence and backing of local officials.[7]

LEMCs are often composed of volunteers from municipal agencies representing organizations relevant to public

safety or people from organizations vulnerable to certain hazards. Besides the customary police, fire, and emergency services organizations, LEMCs as consultative bodies frequently include representatives from hospitals, public works, nursing homes, land-use departments, schools, building inspection agencies, environmental organizations, public health agencies, and local industries, to name a few.[8] The reason for this broad inclusiveness stems from the need for local emergency managers both to consult with representatives of these stakeholder organizations as they draft emergency plans and proposals and to win the broad pluralistic consent and support they need to secure political or administrative approval of their plans and proposals. Such is the essence of Jeffersonian emergency management at the local level.

Jeffersonian principles apply at the state government level as well but less so than at the local level. Successful state emergency management depends on the active and sustained interest and support of the governor. However, state emergency management is conducted more in a world of bureaucratic politics, state legislative oversight, and intergovernmental relations such that this work is often far removed from direct public interaction. In federal emergency management, detachment from the general public is even greater and public participation in emergency management at that level is very circumscribed and frequently heavily co-opted. In federal emergency management, presidential support is vital, and the collective public perception of emergency management is of great political and managerial importance.

The Hamiltonian Model

Alexander Hamilton, who was a Revolutionary War hero, a major architect of the U.S. Constitution through *The Federalist Papers,* and the first secretary of the U.S. Treasury, believed that public managers must put emphasis on getting results. In a Hamiltonian approach, public managers expect others, especially strong elected executives, to judge them by whether or not their efforts produce the desired results. They work under after-the-fact accountability, and their concerns are performance and evaluation under public law. Hamiltonian public managers must be expert decision makers, must be students of organization, and must possess executive talents in formulating plans and carrying out duties. Hamiltonian public managers know the substance, tools, and processes of their work.

A Hamiltonian public manager is in many ways a technocrat who possesses special knowledge and expertise most average citizens do not have and who works under norms of objectivity and political neutrality. The rise of a professionalized U.S. civil service system of government employment in the 1930s and its perpetuation today demands well-educated public managers. Moreover, the complexity and vast array of public problems and governmental responsibilities demands that managers possess specialized knowledge and technical abilities. Emergency management is time and knowledge sensitive. Thus, Hamiltonian emergency managers can be trusted to act independently and with dispatch. Time pressures raised by the acute needs of emergencies and disasters often make it difficult and inefficient for Hamiltonian managers to work exclusively through a community- or public-participation model of consultation and decision making. One proponent of Hamiltonian-style emergency management wrote the following:

> In order to design and deliver such a sophisticated learning management system, it means tapping into the greatest minds in the fields of emergency management, disaster research, public health, community development, computer technologies, distance learning education, multimedia, virtual community building and facilitation, and simulation gaming.[9]

Hamiltonian forces have over the past thirty or more years converted emergency management into an intellectual and scientific enterprise. Significant advances in hazards research—most particularly in meteorology, seismologic studies, and physical geography, as well as in the building sciences, climate change research, and environmental studies—gave further credibility to disaster research.[10] These advances coincided with, and often were made possible by, major technological innovations: the emergence of the Internet and the World Wide Web advances in high-speed computing; broadband fiber-optic and Wi-Fi communications; a massive increase in data storage; the development of personal computers, laptops, and smartphones; sophisticated computer software; civilian use of satellite telemetry of data about the atmosphere and surface of the earth; social media; and geographic information system (GIS) technology.

The new technologies automate emergency planning, response, recovery, and mitigation. The combination of GIS software and global positioning system tools, including remote sensing, empowered emergency managers to do things they could only imagine a decade before.[11] Advances in communications technology and the rise of social media means that in merely seconds countless people have the capacity to use their iPhones and tablets to produce and disseminate to the web pictures, video, and audio of what they are witnessing or experiencing. No longer must emergency managers rely exclusively on their in-house communications resources or the news media to provide them with a stream of disaster information.[12]

The social sciences also made major contributions to the field through the work of disaster sociologists, political scientists, economists, social geographers, demographers, and urban planners. Sociologists expanded knowledge about how people behave in disaster circumstances. They helped identify "mythological" and incorrect assumptions many people had about how individuals and groups behave before, during, and after disasters. They advanced understanding about how people receive, comprehend, and respond to warnings and alerts. Political scientists explained how disaster was emerging as a new domain of public policy, flush with major political actors,

interest groups, and a political process. They demonstrated how emergency management involves politics, law, and governance. Economists took on the daunting task of studying and measuring the economic effects of disasters. They produced a copious body of work on how insurance may or may not be used as a tool of disaster mitigation. They explored emergency management and disaster preparedness in terms of public finance and public budgeting as well. Social geographers, demographers, and urban planners produced many studies that promoted practical knowledge of emergency management. Owing to their contributions, new communities and residential developments could be better designed and built to be more disaster resistant and better able to keep people from occupying unsafe areas.[13]

Emergency management advanced as a Hamiltonian-style area of expertise in other ways too. In the 1990s, the Federal Emergency Management Agency (FEMA) developed Hazards U.S. (HAZUS), an earthquake simulation applicable and adaptable to most of the nation, and Hazards U.S.-Multi-Hazard (HAZUS-MH), a powerful risk-assessment software program for analyzing potential losses from earthquake, hurricanes, and more. FEMA distributed it free of charge on the Internet, thus making a huge contribution to seismic engineering science and disaster loss estimation. HAZUS-MH also models loss from wind and flood.[14]

Modern emergency managers are expected to be well educated and professional. They are expected to manifest knowledge, skills, and abilities that average citizens could not be expected to have. Moreover, they are often expected to make independent judgments and decisions drawing on their authority of expertise. This is the epitome of Hamiltonian-style emergency management.

However, emergency managers in the course of their work cannot easily behave as both a good Jeffersonian and a good Hamiltonian simultaneously. The two theories point to two fundamentally different ways to approach public management work. Although the two theories may be compatible in some rare circumstances, they ordinarily stand in basic counterpoise to one another. In his pioneering work of 1948, Dwight Waldo argued in his book, *The Administrative State,* that public administration scholarship revolved around a core set of beliefs, one of which was that "efficiency and democracy were compatible."[15] In many respects they are not. Jeffersonians press for making public administration advance democracy. Hamiltonians advocate a public administration that rests on efficiency, or in modern parlance, state-of-the-art professional expertise. Also criticized in the 1948 book were those who would advance a science of administration geared to maximizing efficiency. A "science of administration," the author said, tends to overlook and ignore the political ramifications of public administrative work.[16]

Emergency managers have much to learn from these two management approaches. Sometimes they need to behave in a Jeffersonian manner and at other times they must perform as a Hamiltonian. If managers understand these theories, they may be able to make more informed decisions in the course of their work. They also may be better able to cope with the competing demands of their work. The key is to know when each behavior, Jeffersonian or Hamiltonian, is called for. However, today a third model of public management may be emerging in U.S. emergency management.

The Jacksonian Model

Andrew Jackson[17] was a military hero of the War of 1812 and a two-term U.S. president first elected in 1828. Born in Tennessee, he was the first president whose birth state was outside the original thirteen states. He is known for founding the Democratic Party (which actually left the then-Republican Party), and he was dubbed the "people's president" because of his respect for the common man.[18] Jackson's preferred type of government organization was one of loose federal structure with power concentrated at the state and local level. Jackson's vision of America was, indeed, a continental empire of autonomous local communities suggesting that simple and direct governance achieves better results.[19] The Jacksonian tradition was also to promote a strong executive. Jackson distrusted Congress and believed most entrenched politicians were untrustworthy and likely to produce corruption and inefficiency.

Jackson respected the political and moral instincts of the common man, and he advocated allowing the average citizen greater political participation.[20] He is also known for abiding by the adage "To the victor go the spoils." Jackson sought to replace as many government workers as possible with people loyal to himself and his political party. This practice was not uncommon in the era, but it was carried to an extreme by Jackson and many of his successor presidents until the Progressive Era and twentieth-century civil service reform. In sum, the Jacksonian approach is highly populist, advocates decentralization, which grants local governments greater autonomy with direct governance, concentrates authority in elected executives, minimizes legislative interference in public management, and allows elected executives to appoint their political partisans and allies to many government jobs.

Jacksonian public managers are self-reliant, courageous, individualistic, and entrepreneurial. Modern Jacksonian public managers construct their own destiny despite once working within the patronage system of placing political supporters into appointed government offices. Courageous Jacksonian public managers present themselves as prominent figures and assert their personality with zeal while siding unconditionally with their beliefs.[21] They articulate public desires sometimes in defiance of political elites to whom they are profoundly suspicious. Individualistic and entrepreneurial, the Jacksonian public manager will take the initiative and pursue new directions in light of government perversion or inefficiency.[22]

Jacksonian emergency managers do well as intermediaries between state and local governments and responders who must carry out the modern Incident Command System (ICS). Jacksonian emergency managers address state and local level concerns while managing friction among officials and agencies at the federal level even as they advocate for greater public participation.[23] Jacksonian public managers accomplish this because of their generally daring and entrepreneurial spirit, their strong belief in public participation, and their impatience with federal-level delay or inaction. Though they possess political and public media savvy serving them well in public relations, their ability to assert public desires—even if this is in conflict with the wishes of organizational elites—is what is needed as they interact with ICS-compliant responders at the state and local level.

Table 2-1 Public Management Models

Table 2-1 Public Management Models

	Character profile	Focused on…	Key constituency	Animating principle
Jeffersonian model	Educated generalists adept at tuning in to public concerns	Management at the local level	The grassroots public and their elected officials	Democratic process
Hamiltonian model	Technocrats with executive skills and understanding of the bureaucracy	Management at the state and federal level	The elected officials who hold them accountable *ex post facto*	Bureaucratic efficiency
	Strong, charismatic	Management	The common public	

Jacksonian model	executives with an orientation toward the public and a practitioner background	that is concentrated at state and local level	and in aid of appointed executives they work under	Entrepreneurial democracy

Note: The author would like to thank Elise Frasier for her development of this table.

The Jacksonian model overlaps but is not identical to the Jeffersonian model. Jackson, like Jefferson, touts the benefits of state and local government though Jackson provides for a state government role that is at least as important as the local government role. Jackson, unlike Jefferson, views government employment as requiring political, partisan, and public commitment more so than education and refinement. If anything, Jackson views government workers of previous administrations as effete and indifferent to the public they were expected to serve. Jackson, unlike Jefferson or Hamilton, thinks corruption and inefficiency flow from legislative interference in administration. For Jackson, emergency managers should work to both represent common people and to aid elected or appointed executives they work under. Jackson and Hamilton both favor strong executives; however, Jackson would despise Hamiltonian federal technocrats who impose their practices and approaches on state and local officials (see Table 2-1).

In an era when government financial problems have undercut portions of emergency management capability at all levels and at a time when disasters have been perceived by many as more political and partisan than in the past, the Jacksonian model may today have a place between the Jeffersonian and Hamiltonian models of emergency management. In some respects, Jacksonian emergency managers are charismatic figures intensely loyal to their executive supervisors but who champion the cause of their agencies in a very public way. They would be well attuned to public sentiments and today probably avid users of social media.[24] They would be more politically motivated than their Hamiltonian or Jeffersonian counterparts, in part because they would recognize how disaster management has become immensely more political. Top Jacksonian emergency managers, though very likely politically appointed to their posts, would be highly capable generalists or former practitioners in the field able to perform well under pressure.

The Role of Theory in Emergency Management

Another good way to explore how political theory may contribute to the study and application of emergency management is to consider its contributions to organization studies and theories of public management.

But before considering these theories, first think about what defines something as a profession. A profession is an occupation that is esoteric, complex, and discretionary. It requires theoretical knowledge, skill, and judgment that others may not possess or cannot easily comprehend. Theory-grounded knowledge is the basis of most professions and it is acquired through higher education. A profession embodies self-directing work. A profession occupies a position of legal or political privilege, or both, that protects it from competing professions.[25] Professions sanction theory and application, something emergency managers must fully appreciate. Furthermore, a profession is regulated by a professional body that sets examinations of competence, acts as licensing authority for practitioners, and enforces adherence to an ethical code.

Regulation enforced by statute distinguishes professions from occupations represented by technocratic groups that aspire to collective bargaining or professional status for their members. For example, medical doctors in the United States and elsewhere work in a profession that requires them to master a vast body of complex knowledge, to train and practice the application of that knowledge, to pass licensure examinations, to agree to uphold an ethical code, and to submit to oversight by professional boards of their profession in the course of their medical practice.

To enter a profession, one needs education and training in a professional program in order to achieve mastery of the necessary abstract concepts. Professions often rely on universities and colleges, since people at these institutions are expert at imparting and creating abstract knowledge. Almost every profession survives competition and encroachment by other professions through special knowledge systems governed by abstractions and accepted methodologies. A profession is able to distinguish itself from other professions by the content and characteristics of its knowledge system. Once people master a profession's abstractions those people enjoy more autonomy in the work they do. People in most professions must be suitably credentialed, and universities or colleges are often able to convey these credentials. Many people find it worthwhile to become a member of a profession, because along with greater freedom of action, they come to assume high-paying, high-status, and often socially or politically powerful positions.

If those working in the field of emergency management want to establish their work as a profession, they have to do so by building and enriching theoretical knowledge of the field of emergency management. Lack of theory or weak theory undercuts emergency management's authority of expertise and contributes to its marginalization: something dangerous in an era of occupational competition within the realm of competing homeland security-related professions. The longer it takes for emergency management to evolve into a bona fide profession, the greater the probability that it will be suffused within an established or more aggressive management-related profession, as perhaps national security, law enforcement, or military professions.

Why is abstraction important in a profession? Abstract reasoning helps produce testable propositions and knowledge that is generalizable and applicable in many contexts. Generalized knowledge furnishes reasoning tools or conceptual lenses. In other words, the generalized knowledge has explanatory power within or across a wide variety of cases and circumstances.

Abstraction and generalized knowledge help individual researchers transcend the world of single case studies. Disaster research is rife with case studies. Many case studies provide extraordinary historical information about specific events in time. However, many case studies imply that each disaster is a relatively unique event. Abstract reasoning and theory developed from the study of many cases provides disaster researchers and managers with some degree of predictive power about future disaster events. Such broad-gauged work also advances hazard risk and vulnerability analysis. However, case studies should not be the sole engine of disaster research and professional development.

How Things Work: To be or Not to be a Profession

Some tend to judge emergency management as a body of unsophisticated skill sets imparted to others through simplified, one-directional training. Worse still is that some might assume "anyone could do emergency management because the field is so ill-defined, diffuse, or based on easily learned behaviors."[27] People might then conclude that emergency managers are interchangeable functionaries who carry out relatively simple tasks with clerklike efficiency during episodic periods officially defined as disasters or emergencies.

This conceptualization may appeal to Jeffersonians because it rests on simplification, facilitates mobilization and participation of unskilled volunteers, and maximizes political control and grassroots political responsiveness. However, there is not much use for Jeffersonian emergency managers between disasters. Jeffersonian emergency managers have little or no role in mitigating disasters or reducing hazard vulnerabilities in any sophisticated way; and these emergency managers are neither well suited to address the causes of disaster nor likely to understand the complex, multifaceted ramifications of disasters and emergencies.

It would be reasonable to expect the recommendations of *professional* emergency managers to top political officials, including the president and White House officials, to be respected and taken seriously, owing to the substantive and technical merit of the recommendations themselves and because the recommendations were conceived by those with acknowledged expertise (extensive education, training, and experience). If political officials do not consider emergency managers as part of a specialized, knowledgebased profession, or if they consider emergency management skill sets interchangeable or indistinguishable from that of other professions, those political officials might conclude that their own judgments about disasters and emergencies are just as valid as those of their emergency managers.[28] In other words, emergency managers would lack an "authority of expertise," and (generalist) emergency managers might then be supplanted by political appointees who have little or no emergency management training or experience. For example, President Obama assigned the November 2012 federal lead agency work in Superstorm Sandy disaster recovery to officials of the U.S. Department of Housing and Urban Development (HUD) rather than to FEMA, much to the consternation of FEMA employees.

A caveat is in order. One scholar of disaster research has written the following:

> Disaster is a term, which has been defined, understood and packaged by the so-called "experts" to an extent that disaster reduction has become merely a problem solving exercise. The definers declare what they perceive as a problem and how they intend to solve it….

He adds, "There needs to be a strong interface between 'reality' of disaster constructed by us 'the experts' and the one created by the victims based on their worldviews."[29] This is fair warning for those who seek to become professional emergency managers. Jacksonian and Jeffersonian emergency managers would agree.

Abstraction enhances the value of experiential learning and case studies by enabling those with field experience to collect empirical evidence amenable to analysis by themselves and by others, most particularly those experts working to add predictive power to the theories they are developing and testing. Abstraction provides a basis for improved qualitative and quantitative examinations of social and physical phenomena; this includes disaster phenomena. The logic and rationalism supporting abstract reasoning facilitates the co-production and exchange of knowledge between people of different scientific disciplines, something essential in emergency management work.

Emergency management as a field achieves greater academic legitimacy when its core theories and concepts have currency in the physical and social sciences. Conversely, physical and social scientists are likely to contribute to the theory and conceptual growth of emergency management and disaster studies if they conclude that emergency management is a knowledge-driven, research supportive realm.

The outcome of disputes regarding who may officially accredit emergency management education programs and who may certify people as qualified emergency managers will profoundly affect whether and how emergency management evolves as a profession.[26] Theories and concepts are engines of knowledge creation, but in emergency management the matters of developing and testing theories and deciding what constitutes knowledge may well be determined by the authorities and interests that win accreditation and certification powers (see the "How Things Work" box).

Bureaucratic Politics Theories and Emergency Management

In a nutshell, the bureaucratic politics model and its theories strive to explain why public officials do the things they do. These theories suggest that the desire of public officials to protect or promote their own agency's special interests (as they compete with other agencies) forms a major motivating factor in shaping the timing and the content of their decisions. "Bureaucratic politics are conducted quietly, behind the scenes, in skillful ways, with strategic reversals possible, caution, and contentment with sharing credit for good results. A person needs these attributes in order to exhibit good statecraft."[30] The statecraft of political administration is how effectively people fulfill the obligations of the office they hold and how much they advance the welfare of the entire polity and state from the official position they hold.[31] Statecraft is defined as "using and risking political power through action."[32] It is political leadership multiplied by bureaucratic power.

In other words, each government division, program, or office leader continually strives to maximize her or his budget and authorized workforce, as well as protects or extends his or her operating autonomy and discretion in decision making in the area of their assigned responsibilities. Often this can be most readily accomplished by lobbying for an expansion of their unit's responsibilities. The policies and policy recommendations generated in the executive branch of the government and passed on to both the chief executive and the legislature are often better understood as the by-product of bureaucratic turf battles, interoffice competition, and expedient compromises between administrative chieftains rather than as the product of reasoned analysis about how to most effectively and efficiently to carry out the law and policy commitments of the elected chief executive so as to serve the public interest.

How Things Work: The Cuban Missile Crisis and Bureaucratic Politics Theory

The political scientist Graham Allison used the Cuban missile crisis as a case example to demonstrate that there were analyzable alternative explanations for political events. Allison's work had a dramatic effect in clarifying and differentiating a bureaucratic politics conceptualization.

Each of Allison's models can be adapted to help explain presidential decisions to declare disasters in a different way. For example, the rational actor explanation holds that the president decides largely on his or her own, as a unitary actor, on behalf of the entire federal government. It also assumes that individual rationality surrounds that decision making. The rational actor model would assume that each president decides whether to approve or reject a governor's request for a presidential declaration of major disaster or emergency independently, perhaps after consultation with various advisers.

The governmental or bureaucratic politics model explains presidential decisions on disaster declarations as the outcome of negotiations between senior political appointees (agency heads, cabinet-level secretaries, state emergency management leaders, and so forth) and elected executives (governors, mayors, and the like). Allison refers to these players as elites. Their bargaining and negotiation activities culminate in persuading the chief executive to take some course of action or to make some type of decision. The bureaucratic politics model assumes that whether or not a president issues a declaration of major disaster or emergency is largely based on the recommendations of a combination of these major political actors. Certainly, in asking, a governor presses the president to approve the governor's request by convincing the president of the worthiness of his or her request. Presidents are also advised, sometimes in group settings, by their staffs, by their confidants, as well as by lawmakers.

Allison's organizational process model would maintain that presidential decisions regarding declarations of disaster are essentially a routine administrative determination handled by a stovepipe-connected assortment of federal, state, and local disaster management officials. The organizational process model contends that emergency management professionals compile disaster damage information and they use it to review gubernatorial requests for declarations (the governor's request itself would be the product of state emergency management agency activity). In the organizational process model the executive has either largely delegated decision authority to someone else or rubber-stamps the official recommendation of his or her emergency management functionaries.

One would expect presidents to decide and act on very major, even catastrophic, disasters as a rational actor. One might also expect that disasters or emergencies that pose unusual or unanticipated political and management problems would encourage the bureaucratic model type of decision making. Finally, very routine disasters and emergencies (seasonal flooding, winter storms, metropolitan power outages, minor earthquakes in seismically active zones, and the like) that are neither major nor catastrophic and that involve few political costs or benefits for a president, would, one would think, elicit an organizational process model decision.

Applying the study of bureaucratic politics allows us to think about emergency management theory. Let's think about emergency management by way of three models of bureaucratic politics: a rational actor model, in which the president independently makes his or her own decision; a bureaucratic politics model, in which the president follows the recommendations of senior political appointees and other elites;and an organizational process model, in which the decision largely rests with various lower-level disaster management officials (see the "How Things Work" box).[33]

Much of the world of emergency managers is made up of bureaucratic politics. Often emergency managers must work with elected executives (as a rational actor), must bargain and negotiate with very senior political or merit-appointed administrative officials (an organization process), and must be responsive to legislators (governmental or bureaucratic politics). To succeed, they must demonstrate technical competence as well as lead or manage the coordination of people working in their own agency or department and bring about the coordination of work by other departments or agencies. Theirs is a world of high-tension inter-governmental relations and intense media coverage.

Public Management Theory

Remember, the essence of modern emergency management is "management." More precisely, it is "management" that is based on contemporary principles of organization theory and administration. The ethos of U.S. emergency management in a nutshell is as follows:

- emphasis on grassroots local emergency management in emergencies and disasters with overhead governments providing help but not taking command or control of local emergency response and recovery operations
- emphasis on the four-phased cycle of emergency management: mitigation, preparedness, response, and recovery
- emphasis on contracting out services and eschewing direct delivery of services where possible
- emphasis on best practices, after-action reports, and continual reform
- emphasis on deregulated activity and a high tolerance for risk taking and adaptation (note: U.S. emergency management is a policy domain with very little regulation, and those regulations that do apply usually come through rules and conditions specified in federal grants to state and local governments. An exception is the case of local land-use and building regulation.)
- emphasis on leadership that is entrepreneurial and adept at drawing in free or inexpensive help through coproduction efforts and public-private partnerships
- emphasis on facilitating change and creating public value, most particularly through disaster mitigation and preparedness activity[34]

Best-Practices Approaches

At the intersection of public management and bureaucratic politics, we find what is referred to as best practices. The best-practices approach is a method of producing knowledge by observing (or recounting) field experience and then creating applicable principles. This is often described as "practice as the basis for scholarship," not scholarship as the basis for practice, and reflective practitioners are needed to make the best-practices approach work.[35] Here, public management study becomes a kind of art form. The practitioner draws the picture for the observer. Rudolph Giuliani, former New York City mayor, and James Lee Witt, David Paulison,[36] and Craig Fugate,[37] all former or current FEMA leaders, stand as good examples of users of best-practice knowledge and emergency management reflective practitioners.[38]

Another best-practices approach is to create knowledge based on empirical validations of useful propositions derived from models—in other words, building practice wisdom as a social scientific approach to scholarship and as a basis for professional practice. This is the applied heuristics approach. Such analytical approaches help public managers deal with a messy reality. These approaches and models allow for experimentation, trial, and error; they were the early basis of policy analysis. For public managers, heuristics are verbal explanatory sketches or conceptual frameworks, which help them to produce adequate explanations for puzzling things. Heuristics embody propositions subject to confirmation or disconfirmation; in other words, one can test the utility of the proposition. For example, one can test the proposition that increased federal funding to a state's terrorism preparedness program will improve its terrorism response capability. This can be measured in part by evaluating the performance of state emergency managers via unannounced terrorism drills and exercises.

Detailed studies alleged to represent best practices in public management have been criticized because they are often not good guides to scholarship, teaching, or practice. However, some open-minded studies of cases, especially those showing how public executives shape the institutional frameworks for policymaking and execution, have been praised for their contributions to theory knowledge.[39] Government executives are the molders of contexts that will affect public policy in both the short and long runs. Best practice research flows from a broad perspective on public executive leadership—one that draws from classic works on executive leadership inspired by practice.

Analytical Approaches versus Social Constructivist Theories

Within subfields of various physical and social scientific disciplines, there is an incredible range of analytical approaches to the study of disaster (e.g., meteorology, climate science, seismology, volcanology, sociology, policy studies, economics, physical geography, epidemiology, emergency medicine, engineering). Those advancing the analytical approach to the study of disaster have benefited from advances in high-powered computing and the development of sophisticated software programs (computer-based data analysis, GIS, HAZUS, and others).[40] Emergency managers and students of emergency management must embrace analytic approaches and tools in order to advance disaster study and research.

However, the generalization sought in analytical approaches dismisses the assumption, "Reality is a social construction rather than an objective construct that is the same for all observers."[41] Those following social constructivism might argue that it is the actions and persuasiveness of people, perhaps amplified through mass communications, that defines what is or is not a disaster. In other words, the "reality" of some disaster phenomenon may be more an issue of how people have conceived of and conveyed the "idea" that a disaster has occurred. Consider the following claim: "Whether an event constitutes a disaster, how probable and how damaging disasters are, and what can be done to reduce their impacts, are socially produced through organized claims-making activities."[42]

Some social constructivist scholars working in the disciplines of sociology or political philosophy maintain that organizations (including government organizations) are systems of socially constructed and cognitively ordered meanings.[43] I once listened to a respected and brilliant economics professor glibly inquire, "So FEMA makes disasters?" What he was inferring was that the mere fact that the government has established FEMA, presumably composed of disaster management experts, suggests that those experts will look for opportunities to apply their skills and expertise. As FEMA officials they would have great incentive to find more and more phenomena they could persuade the president to declare as disasters or emergencies so their agency could prove its worth, serve public needs, and win more authority and larger budgets.

In contrast, empiricism is the collection of information about the physical and social "real" (existential) world, which is so essential to analytical approaches. Empirical research loses out if the social constructivist approach to disaster research dominates. This is because social constructivists are likely to routinely discount empirical information and scientific "facts" as mere products of individual or group constructions of social "reality" and personal belief systems. "A constructivist theory of social problems explains problems and policy issues by focusing on people's actions rather than on the putative 'conditions' that are the object of those actions."[44] "Conditions" are alleged to exist and to have harmful qualities owing to issue advocates and claims makers. For example, television news reporters disclose certain important human needs that they allege or infer must be addressed by government. Also, political actors representing what they perceive to be the needs of various individual people or aggregations of people and interests issue clarion calls for action. Some of these people may be elected government officials, some may be officials representing an interest group, and some may be independent social advocates. Social media have added yet another mammoth layer of perceivers, constructivists, and claims makers. The concern here is how issue advocates and claims makers define problems and their policy solutions and how they are able to persuade others to take their concerns seriously, even to the point of getting them to act on those problems.

Today, constructivist theory is widely popular in many academic realms, including disaster sociology[45] and political study.[46] Social constructivist research has an important place in the intellectual sphere of emergency management.[47] There is a growing body of scholarship, international in scope, predicated on social constructions of the disaster phenomenon. Much of it is insightful and much of it is relevant to political officials and their advisers. Political officials need to understand how people comprehend safety and danger, how they formulate judgments of risk and vulnerability, and how they gauge the effectiveness of disaster management (particularly given their role in the situation: disaster victim, unaffected observer, emergency responder, and so forth).

Social constructivism and its variants, however, do not represent the only intellectual paradigm through which to conduct disaster research. Several alternative theories and paradigms—such as scientific rationalism,[48] empirical study, management theories, institutional studies, public policy analysis, and some interdisciplinary theories that link the physical and social sciences—offer more instrumental and application usefulness for emergency managers than does social constructivism.

Network Theory

The modern world of organization, including the world of government public organizations, is increasingly built and maintained through networked intelligence. Network theory is a field of computer science and network sciences and is also part of graph theory (the study of graphs and mathematical structures). It is often deployed to examine the method of characterizing and modeling complex networks. Many complex networks share some common features. Network theory is also applied to logistic networks, gene regularity networks, metabolic networks, the World Wide Web, ecological networks, epistemological networks, and social networks. It is applied in multiple disciplines, including biology, computer science, business, economics, particle physics, operations research, and, most commonly, in sociology.[49] The use of networked information systems is critical in modern emergency management. As Gareth Morgan observes, "Information systems that can be accessed from multiple points of view create a potential for individuals throughout an enterprise, even those in remote locations, to become full participants in an evolving system of organizational memory and intelligence."[50] Networking through organizational information systems creates the possibility of achieving a shared organizational mind.[51]

Extensive "between disaster" emergency management work involves preparedness activities including planning, simulations, and exercises. Facilitated by the Internet and the World Wide Web, government emergency managers have established immensely rich, and sometimes unnecessarily complicated, emergency plans and preparedness tools devised through elaborate networked intelligence exchanges among themselves and with others, including nongovernmental nonprofit and private sector partners and to a lesser degree the general public. Networked intelligence was championed to a great degree by advocates of the New Public Management of the 1990s.

Networked intelligence in disaster management is both a blessing and a curse. It makes needs more obvious and does so relatively quickly, it facilitates interorganizational coordination, it helps mobilize aid providers in a more coordinated and sensible fashion, and it expands the pool of participants in ways that may well serve the needs of disaster-stricken citizens and subnational governments. Conversely, networked intelligence is extremely difficult for organizational leaders to manage. Elected government executives and lawmakers are often hard-pressed to hold networked organizations and people accountable for failures. Networked organizations rely on technical resources (e.g., uninterrupted electricity flows, undamaged telecommunications infrastructure or infrastructure that can sustain colossal usage demands in emergencies, durable software, interoperability) that may not always be available when needed. Moreover, disaster victims may be unable to access the Internet for long periods or they may lack the ability to use modern computer-based information technologies required to make application for help.

Yet sometimes the failure of one communications technology may be addressed with another one. After the Moore, Oklahoma, tornado disaster in May 2013, FEMA dispatched to the damage zone a set of trained volunteers, as a Disaster Survivor Assistance Team, equipped with tablet computers. These people aided the tornado damage victims they encountered by helping them make online application for aid using prestored forms that, once completed, could be e-mailed immediately to the appropriate government disaster assistance offices. "FEMA officials are registering individuals on site with iPads."[52]

For better or worse, networked intelligence will be a dominant feature of public administrative organizations for many years to come. A great many deficiencies of networked emergency management were revealed in the slow and incompetent U.S. federal, state, and local governmental response to Hurricane Katrina in 2005. Dozens of post-Katrina investigations document the problems surrounding situational awareness, communications difficulties, and dependence on a massive and largely untested National Response Plan (NRP) (itself a manifestation of networked intelligence).

Principal-Agent Theory

Principal-agent theory assumes that managers function in an environment in which they cannot observe whether their agents in fact carried out the instructions they issued as principals. In addition, it assumes that agents hide information from principals and that agents may use the information to act in ways contrary to what principals intended. Principal-agent theory gives rise to performance-based government contracting studies.

For example, the study and use of principal-agent theory would not only help government emergency managers better understand the realm of contracting and grants management but would also press elected and appointed officials to work jointly toward achieving legal and policy goals. Thus, they would better be able to oversee and steer contractors to do what they are expected to do. Principal-agent theory may also help them oversee and influence the behavior of their grantees working in state and local emergency management organizations.

Principal-agent theory helps integrate normative noneconomic concerns with structured economic analysis. This approach involves refining situational logic.[53] Principal-agent theory seems quite appropriate in the world of emergency management.[54] Government emergency managers work in a universe of federal, state, local, and private sector agencies. An immense amount of government emergency management work is contract management, involving private contractors and nonprofit volunteer organizations. In a sense, government officials are principals who retain agents, in this case contractors, who in turn carry out various duties, functions, and tasks. Information flows among agents and principals. This information is used by policymakers and government officials and influences their decisions in matters of fund distribution, budgeting, planning, program administration, and management in general. Emergency manager principals might be well served by using normative factors (i.e., Was the public happy with the job the contractor performed? How quickly was work completed and how satisfied were clients or customers with the products and services they received from the contractor?) They may use structured economic analysis to help ensure that contractor agents addressing disaster-related needs are better guided toward achieving the goals emergency manager principals are legally and officially obligated to meet.

"Working the seams" is part of principal-agent theory. Public managers must know how to work the edges of administrative-legislative interaction, intergovernmental relations, agencies, and interest groups.[55] Seams are gray zones. They are areas in which there is legal and administrative flexibility. Disasters and emergencies often require that emergency managers behave adaptively, bend or ignore rules that confound or delay their work, and establish new and often unusual modes of interaction with people and organizations they do not often encounter in normal periods. They need technical and analytical knowledge to do this. Their world is composed of agents, seams, and a technical core.

Intergovernmental Relations Theory

Three models have commonly classified intergovernmental relations: inclusive authority, overlapping authority, and coordinate authority.[56] Although those relations in emergency management at one time more resembled a coordinate-authority model, they have moved through an overlapping-authority model finally to become an inclusive-authority model.

The coordinate-authority model assumes a sharp and distinct boundary between separate national and state governments. National and state governments appear to operate independently and autonomously, and they are linked only tangentially. Moreover, in the coordinate-authority model, local governments are somewhat dependent on their respective state governments.[57]

Before 1950, disaster management in the United States conformed to the coordinate-authority model of federalism and dual federalism. The *Stanford Encyclopedia of Philosophy* defines *federalism* in the following way:

> Federalism is the theory or advocacy of federal political orders, where final authority is divided between sub-units and a center. Unlike a unitary state [system], [in a federal system] sovereignty is constitutionally split between at least two territorial levels so that units at each level have final authority and can act independently of the others in some area. Citizens thus have political obligations to two authorities. The allocation of authority between the sub-unit and center may vary, typically the center has powers regarding defense and foreign policy, but sub-units may also have international roles. The sub-units may also participate in central decision-making bodies.[58]

The period from 1789 to 1901 has been called the era of dual federalism, "characterized as an era during which there was little collaboration between the national and state governments." However, in the period from 1865 to 1901, the national government began to move into several policy areas that had previously been the purview of the states.[59]

In the coordinate-authority model, local governments often handled major disasters and emergencies on their own with only intermittent state government help and with very little federal help. When local governments could not cope, they sought state government help, usually petitioning the governor or state legislature. State governments coped with disasters and emergencies that largely affected state government assets, infrastructure, and interests. United States policy has long assigned the responsibility for disaster management to the government jurisdiction(s) that experienced the disaster. As Clinton-era FEMA director James Lee Witt used to say, "All disasters are local."[60] The responsibility for public safety is a local government role under American federalism.

From 1950 to about 2003, U.S. disaster management could be categorized as an overlapping-authority model. In the overlapping-authority model, substantial areas of governmental operations involve national, state, and local governments simultaneously. In the overlapping model, areas of autonomy or single-jurisdiction independence and full discretion are relatively small. Power and influence for any one jurisdiction is substantially limited and authority patterns involve heavy bargaining.[61]

From a disaster studies viewpoint, if a disaster or emergency exceeded the response and recovery capacity of the local government, the local government executive officer (mayor, city manager, county executive, or the like) and the city or county council declared a "local disaster." This was often followed by a local request for state and federal assistance. The governor may respond to the request by issuing a state declaration of disaster or emergency. Once the governor declares a state of emergency, the local government may then receive personnel, goods, services, and funding from the state to deal with the disaster. If the governor believes that the disaster may overwhelm the capacity of the state to manage the emergency effectively, the governor then sends the president a request for a presidential declaration of major disaster or emergency. A presidential declaration of major disaster mobilizes a multi-departmental, multi-program federal response conducted in coordination with state and local officials and

agencies.

This overlapping, layered approach to local, state, and federal relations correlates with the overlapping-authority model. In this model, no one level of government is dominant, and no level intervenes in the affairs of another without the permission of that government.

The era of overlapping authority in U.S. disaster policy came to an end after the 9/11 terrorist attacks and with the ensuing enactment of the Homeland Security Act of 2002, the establishment of the U.S. Department of Homeland Security (DHS) in early 2003, and a succession of Bush administration presidential homeland security directives.

These changes—including the creation of a National Response Framework (NRF) and National Incident Management System (NIMS)—brought on an era of inclusive authority. Under the inclusive-authority model, each level of government has a diminishing proportion of responsibilities, from the national to the state to the local government level.[62] Under the inclusive-authority model the federal government plays a key coordinating role as the states and federal government cooperate and interact in certain critical areas. The inclusive-authority model assumes the sharing of power and responsibility, with the various participants working toward shared goals.[63] The model also conveys the essential hierarchical nature of authority. In some respects, the new homeland security paradigm has made states and localities "mere minions of the national government." The role of the state as the "service delivery arm" continues as it has since 1950. However, the federal government provides "its vast resources" as a new backstop for state and local governments.

In the inclusive-authority George W. Bush era, homeland security presidential directives, several new federal laws, and a battery of new federal grant programs were introduced. Collectively, these measures dictated to local governments the exact steps they were expected to take in emergency management. These measures placed terrorism preparedness above preparedness for all other types of disaster agents. The effect of these reforms was to move both emergency management and homeland security toward "nation-centered" federal dominance within an inclusive-authority model. DHS authorities told states and localities that they would be heavily consulted and welcomed "partners." Yet the profusion of "top-down" directives and the vast sums of federal money used to steer states and localities in various directions have left little space for state codetermination and even less local freedom of action.[64] In the Barack Obama era, the inclusive-authority model remains paramount, though tempered by extensive efforts to include state and local interests in formulating disaster mitigation and disaster recovery frameworks (DRFs) for emergency management. As in the previous administration, federal pre- and post-conditional disaster assistance has a major impact on how state and local government participates.

Complexity Theory, the Complexity Paradigm, and Self-Organization

Complexity theory is a possible and evolving framework for understanding the nature of "wicked"problems.[65] Social systems, including the public policy process, are complex. From a complexity theory perspective, public policy is "a self-organizational and dynamic complex system."[66] Complexity theory illustrates that policy problems are dynamic, that the policy process has multiple interacting components, and that multiple actors have conceptually unique mental models of policy problems. Core concepts of complexity theory—self-organization and system dynamics—can inform our mental models of social systems to help us understand and solve wicked problems.[67] There is as yet no unified complexity theory. Moreover, complexity theory embodies models and methodologies of many other theories. Some consider it a descendant of systems theory. Morcol's work is mentioned here because it represents an early effort to develop a framework for complexity theory in the realm of public policy. He employs terms such as nonlinearity, systems, complexity, emergence, self-organization, system dynamics, and coevolution.[68]

The complexity paradigm differs from complexity theory. A paradigm refers to how groups, particularly academic groups, go about determining and sanctioning what constitutes knowledge in their respective disciplines or fields. Paradigmatic theory holds that what constitutes knowledge is subject to possible dramatic or comprehensive change over time as a function of new breakthrough information or inventions, or change in the collective thinking of experts in a field. This change tends to undermine, refute, and delegitimize what was once "conventional" and accepted ways of studying and conceiving of a subject.

K. Smith maintains that "Most successful paradigms capture best practice from the past and absorb that experience into a fresh approach."[69] In brief, Smith's complexity paradigm is in a formative stage; is informed by many different disciplines and fields; emphasizes disaster mitigation and long-term recovery rather than predominantly preparedness and emergency response; and incorporates vulnerability study, resilience, well-engineered public works, sound land-use planning, plus effective humanitarian assistance. The complexity paradigm assumes that humans are not simply victims of disaster, but that humans themselves "contribute to hazardous processes and to disaster outcomes."[70] The complexity paradigm makes a good case for interdisciplinary knowledge sharing and collaborative research in the disaster field generally. It also advocates ratcheting up the scale of research to consider global environmental change.

Self-organization is a possible basis of democratic management processes. It incorporates egalitarian ideals such as decentralization and democracy participatory schemes.[71] Self-organization is a type of thinking that imbues spontaneity and autonomy. Also, under certain conditions of self-organization, internal and external influences may bring about systemic change.[72] However, a self-organizing system may reorganize its internal structures spontaneously and adaptively to cope with or manipulate its environment.[73] Moreover, a self-organizing system may react to outside forces by transforming itself even as it affects change in its environment. The evolution of self-organizing systems can take two paths: one in which system properties begin to break down or one in which new system properties emerge.

Analysis of Complexity Theory

Emergency managers use the Incident Command System (ICS) to help them organize people and resources during a response. The ICS self-organizes, coevolves, and reorganizes in response to external stimuli stemming from incident demands and does so as a way to cope with a constantly changing situation. For example, if news media people show interest in reporting the incident, emergency managers may assign a Public Information Officer to interact with the media.[74] If numerous other jurisdictions and interested governmental organizations become involved, the emergency manager may establish a Liaison Officer function to coordinate stakeholder concerns and address them through the operational planning process and within an incident action plan.[75]

Public participation as a self-organizing system emerges in two forms. One, individuals with common interests can emerge independently and aggregate as a community of interest (COI), or two, COI can emerge already organized.[76] In the first case, individuals generally emerge spontaneously. Most are unaffiliated with any group or formal organization working with response organizations. Second, in emergency management, these are generally associated with nonprofit organizations impelled by a mission that overlaps that of government response organizations. For example, in some disasters the Audubon Society has a network of volunteers who observe and record wildlife over time to assess ecosystem change. During oil spill responses, those same volunteers mobilize to monitor oil spill impacts and observe for oiled wildlife. Regardless of form, individuals and communities with combined capabilities can take independent action serving typical official government functions. Sometimes they may respond faster than official government emergency responders.

The ICS includes a procedure designed to facilitate official responder interaction with individuals or COIs seeking to participate in the response. The mechanism evolves in scale and scope given the demand for public participation. However, regardless of the form public participation takes, ICS cannot produce new system properties and it eventually breaks down. Though ICS is designed to include a volunteer coordination unit if necessary, often emergent individuals and COIs come to conclude that they have not done enough to encourage or make the best use of emergent volunteers. The public is frequently dissatisfied because they believe self-organization of people in the response phase does not adequately consider local citizen concerns, especially their desire to participate, control their own destiny, achieve legitimacy, and build community capacity.

Although the spontaneity of public reaction is uncontrollable, the conditions leading to it are controllable. Morcol suggests that a dissipating or dispersive social structure takes one of two paths to cope with and manipulate its environment: one in which the system properties break down or one in which new system properties emerge.[77] Federal emergency managers are encouraged to look toward state and local governments to avoid system breakdown. State and local governments understand the unique needs and behaviors of their citizens better than the federal government. State and local governments have rapport with individuals as well as affiliated volunteer groups and know best how to use their collective efforts to achieve larger goals of the response. State and local governments should lead and facilitate public participation even when part of a federal response system.

A challenge for federal emergency managers is the lack of a theory they can use to help them model governance of public participation. Complexity theory solutions may help them manage through structural evolution and chaos. Also, some normative political theory solutions, such as Jeffersonian, Hamiltonian, and Jacksonian theories presented earlier, may help them find ways to accommodate, nurture, and include public participation. The relationships between citizens desiring to participate, the official management structure, and the leadership paradigm are perpetually dynamic. These relationships embody interacting components. All of this takes place in an environment characterized by uncertainty and incomplete information. The goal of the emergency manager is to recognize the forms of public participation that emerge and to adapt the response structure and leadership paradigm in a way that enables people to meaningfully participate.

The core concepts of complexity theory help explain why there are public participation problems. The theory does so by taking into account the influence of self-organization and system dynamics within social systems. Social systems of public participation and governance are comprised of, and influenced by, individual and organizational

actors. Moreover, these systems have internal and external environments. Volunteers, whether individuals or COIs, have internal motives and goals as well as external motives and goals. Internal forces may affect external interactions and vice versa. A self-organizing governance structure should maintain dynamic instability. This helps it to achieve new structures or forms in an environment that is increasingly complex. Self-organization of participation involves constant renewal and openness to feedback from internal and external sources.[78]

Emergency managers, regardless of the level of government they work on, should bring their response organization closer to the community and allow citizens in various ways to participate in decision making. This goes against the standard management assumption that managers are core, unilateral decision makers who seek to remove uncertainty and add clarity when information is incomplete.[79] Managers should abandon the notion that they can control public participation centrally. Instead, through collaboration and close coordination, they should allow state and local authorities and the public to consensually decide how to organize during disasters. Disaster managers at the state and local levels should not surrender to federal control but they should instead organize in partnership with federal authorities.

Complexity theory is advancing a reconceptualization of public policy that seeks to integrate social constructivism and rational-scientific positivism. The reason it is included here is because complexity theory may make major contributions to the field of disaster study and management in the near future. It seeks to make policy study more natural, physical, and biologically scientific while at the same time accommodating postmodern assumptions about human individual and collective behavior. Whether or not complexity theory will provide new illumination for emergency managers remains an open question.

Toward a Theory of Disaster Recovery[80]

Disaster researchers over several generations have been challenged to research a phenomenon that defies simple definition. Disasters are by definition episodic and therefore information about them tends to be highly perishable. They are often outside the realm of whatever defines "normalcy" (itself a controversial subject) and disasters are experienced differently by different individual people, be they as individuals, in families or groups (be they social, political, or economic in nature), or as formal elected or administrative officials of some type. Disasters transpire in several different environments or contexts: natural, personal, familial, community/social, political/governmental, economic, cultural, ecological, geographical, physical/ structural, news/communication, and more. It is not possible to examine all of these environments here, but the political and governmental environment represents a start and the problem of disaster recovery is a worthy target.

There are many theoretical approaches from which to examine disaster recovery. However, it is arguably difficult to set forth common "principles" of disaster recovery, elucidate ways to measure recovery and the course it takes, and chart ways to model future recovery. However, it is possible to build theories that help those on the "public management and public policy side" of the disaster phenomena. Over many months, FEMA established in consultation with a great many state and local stakeholder groups a National Disaster Recovery Framework (NDRF) (see the "How Things Work" box). The NDRF promotes management and consultation schemes by which FEMA and its stakeholders can plan disaster recovery long before disasters occur. Officials leading this effort may have considered theories of public participation of the type examined here. If so, they may succeed in facilitating, improving, and refining pre-disaster recovery planning work of people residing in local governments, communities, and neighborhoods across the nation. This work may produce conceptual tools, variables, and data sets that may allow for broad development and application of disaster recovery theory. Such theory creation may help emergency managers and disaster researchers better measure, model, and generalize about how local people as individuals or as part of a COI plan and make possible their disaster recovery.

Theory tools in the realm of disaster recovery are in high demand for several reasons. First, as mentioned before, they help transcend the case study realm by positing that all disasters are "not unique." In other words, disasters and disaster recovery often embody certain identifiable commonalities. If these commonalities are understood such that generalizations are possible, a worthwhile disaster recovery tool may be forged that will allow for improved disaster recovery planning and eventual implementation. Second, theories manifesting broad explanatory power often facilitate knowledge creation and application that is less ethnocentric or single-nation centered and more international, culturally sensitive and diverse, and teachable. Third, they provide a bridge for the healthy interchange of academic knowledge and practice knowledge.

Exploring what Recovery Might Mean

Let's begin by asking whether disaster recovery is an "end state" or a "dynamic." At the risk of stating the obvious, for a nation manifesting in whole or in part features of democratic governance, disaster recovery is a dynamic which, for that respective nation, can succeed in varying degrees or fail in varying degrees, subject in part to public judgment and political opinion. The notion of an "end state" for disaster recovery is arbitrary because to identify a fixed "end state" is to form individual value judgments in subjective ways about a condition of finality. Also, governments and subgovernments of virtually every nation are constantly undergoing change, sometimes gradually and subtly or other times comprehensively and dramatically. Consequently, it makes sense from a governmental perspective to approach disaster recovery as if it were a dynamic and evolutionary phenomenon. Governments in nations with established systems of emergency management tend to form and implement disaster recovery in accord with pre-disaster adaptable plans and processes. However, it would be a mistake to categorize any government's disaster recovery approach or condition as merely composed of organized processes. Also, the "recovery process" should not be the exclusive focus of those who build disaster recovery theory.

Is recovery "replacement of a rapid loss in a defined area?" Is it a matter of addressing needs, distributing resources, or reducing conflict? Is "recovery" a matter of correcting an imbalance? These are all excellent questions to which the general answer is affirmative.

Is there such a thing as "holistic recovery"? Holistic recovery, or in federal emergency management parlance "whole community" recovery, may be a worthwhile and even admirable social and political goal in the sense that such recovery seeks to address the needs, and sometimes losses (see Chapter 9), of those negatively affected by a disaster in a broadly equitable, fair, democratically responsive, and compassionate way. However, holistic recovery is something that is not yet accepted public policy in nations of the world, and this includes the United States. Equity, fairness, and compassion are in the language of international relations "soft norms" subject to interpretation that varies by one's personal and cultural values.

Should a theory or theories of disaster recovery be customized for specific forms of hazard? From a governmental perspective the answer is "arguably" affirmative. While an all-hazards approach to governmental emergency management has many attractive features, different types of hazards require different (though perhaps often overlapping) types of theory. There are different sets of rational/scientific theories used to study various types of disaster agents (i.e., the geosciences for seismology, and meteorology for atmospheric phenomena). To draw from these theories in disaster recovery studies requires differentiation by type of hazard.

How Things Work: National Disaster Recovery Framework

According to FEMA, the NDRF[81] is a guide that enables effective recovery support to disaster-impacted states, tribes, and territorial and local jurisdictions. It provides a flexible structure that allows disaster recovery managers to operate in a unified and collaborative manner. It also focuses on how best to restore, redevelop and revitalize the health, social, economic, natural and environmental fabric of disaster-stricken communities, cumulatively making the nation more disaster resilient.

The NDRF represents substantial fulfillment of a portion of Presidential Policy Directive 8 (PPD-8): National Preparedness, which directs FEMA to work with interagency partners to publish a recovery framework. It is the first framework published under PPD-8, and it advances core recovery capabilities by supporting operational plans as an integral element of a National Preparedness System. As PPD-8 requires, the NDRF seeks a shared understanding and a common, integrated perspective across all mission areas—prevention, protection, mitigation, response, and recovery—so as to achieve unity of effort and to make the most effective use of the nation's limited resources. The NDRF is also the product of efforts to meet requirements of the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006, which called for FEMA to develop a National Disaster Recovery Strategy.[82]

The NDRF defines the following:

- core recovery *principles*
- *roles* and *responsibilities* of recovery coordinators and other stakeholders
- a *coordinating structure* that facilitates communication and collaboration among all stakeholders
- guidance for pre-and post-disaster recovery *planning*
- the overall *process* by which communities can capitalize on opportunities to rebuild stronger, smarter, and safer[83]

The NDRF creates three positions that provide focal points for incorporating recovery considerations into the decision-making process. People in these posts monitor the need for adjustments in assistance where necessary and feasible during the recovery process. Those positions are as follows:

- Federal Disaster Recovery Coordinator (FDRC),
- State or Tribal Disaster Recovery Coordinator (SDRC or TDRC)
- Local Disaster Recovery Manager (LDRM)

People holding these new positions will have the flexibility to be assigned to some of the hardest hit areas as a result of large-scale and catastrophic disasters so that as a community and a team, the federal government and its partners can ensure a speedy and smooth recovery process.

FEMA calls the NDRF a conceptual guide designed to promote coordination and recovery planning at all levels of government "before a disaster transpires." It defines how six federal agencies will work together, following a disaster, to best meet the needs of states, local and tribal governments and communities, and individuals during their respective recoveries. People using the framework establish coordination structures, define leadership roles and responsibilities, and endeavor to guide coordination and recovery planning across all levels of government before a disaster occurs. It aims for better use of existing resources; faster and trouble-free application for government assistance; local consensus about how, what, and where a community will rebuild after a future disaster; and pre-disaster consultation with all COIs and stakeholders.

Recovery Support Functions

NDRF introduces six Recovery Support Functions (RSFs) that are led by designated federal coordinating agencies. The RSFs comprise the coordinating structure for key functional areas of assistance. Their purpose is to help support local governments by facilitating problem solving; improving access to resources; and fostering coordination among state and federal agencies, nongovernmental partners, and stakeholders. The RSFs and six designated federal coordinating agencies are as follows:

- Community planning and capacity building: FEMA
- Economic: U.S. Department of Commerce
- Health and social services: U.S. Department of Health and Human Services (HHS)
- Housing: HUD
- Infrastructure systems: U.S. Army Corps of Engineers (USACE)
- Natural and cultural resources: U.S. Department of Interior[84]

The NDRF was developed in partnership, and through extensive outreach, with federal, state, local, tribal, private, and nonprofit partners who have a stake in the immediate and ongoing recovery following a disaster. Outreach sessions began in the fall of 2009 led by the Long-Term Disaster Recovery Working Group. This generated thousands of comments and recommendations from more than 600 stakeholders representing federal, tribal, state and local governments, public and private organizations, including communities recovering from disasters.[85]

The NDRF, for the first time, defines how, as a nation, the United States will approach disaster recovery. The framework establishes coordination structures, leadership roles, and responsibilities and also guides recovery planning at all levels of government well in advance of possible disaster.

The NDRF introduces RSFs that are led by designated federal coordinating agencies. These coordinating federal agencies support state, local, tribal, and private sector groups with community planning and capacity building and also regaining economic stability, rebuilding infrastructure, restoring health and social services as well as natural and cultural resources, and meeting the housing needs of residents displaced by disasters.

In addition, the NDRF recommends and identifies key recovery leadership positions designed to allow for more concentrated focus on community recovery. These include SDRCs or TDRcs and LDRMs, as well as a FDRC when needed for large-scale and catastrophic disasters.

The effective implementation of the NDRF, whether or not in the context of a presidential disaster declaration, requires interagency cooperation and engagement across all levels of government and support from NGOs, COIs, and the private sector. NDRF concepts also present an opportunity for emergency managers and others to increase collaboration and coordination of recovery resources.

The NDRF sets forth a clear structure for interagency and nongovernmental partners to align resources and work together to support recovery in a holistic, coordinated manner.

We exist in a world of complex systems. There are social, economic, and political systems, as well as engineered systems, to name a few. Even our domiciles represent systems. Buckminster Fuller long ago sought "a house that would function like a machine to improve the quality of life for its inhabitants,"[86] as well as to maintain the health and safety of the occupants. Many such systems are joined or interlinked. A theory is a "relational statement." Perhaps the best we can do is to fashion a "framework," which is perhaps the thinking behind the NDRF. Also, we cannot overlook the need for state and local input on matters of disaster recovery.

This being said, it is also true that different types of hazards have different sets of political clientele. Theory about disaster recovery might well be shaped by the interests and motives of those preoccupied with the nature of the hazard that may be imputed to have caused the disaster. From the perspective of government and governance, theories of disaster recovery should take into account the type of hazard and the type of damage associated with that hazard. Birkland has demonstrated that certain types of hazards have identifiable sets of political interests.[87] Few who work the emergency management field would dispute the claim that in the United States there is an "earthquake" COI. More precisely, certain types of hazards have their own communities of practice (CoPs). These are groups of people who share a concern or a passion for something they do, and they learn how to do it better as they interact regularly. The difference between a COI and a CoP is that members of a CoP are practitioners.[88]

COI has a social rather than spatial definition:

A community of interest is a gathering of people assembled around a topic of common interest. Its members take part in the community to exchange information, to obtain answers to personal questions or problems, to improve their understanding of a subject, to share common passions, or to play. Their synergy cannot be assimilated into that of a formal group motivated by a common goal. Communities of interest have a variable lifespan. Some appear and disappear at soon after their creation, while others thrive for years. Often they divide into smaller communities.[89]

This stems from fragmentation of the membership owing to people's interest in various specialized topics. COIs form in both the in-person world and the virtual world, sometimes simultaneously. For example, a COI that formed around the issue of safe room protection for children while at school in the aftermath of the Moore, Oklahoma, area tornado in 2013.

There is a "hurricane" COI, a "flood" COI, and a "tornado" COI, to name a few. Likewise, each of these has a CoP. Moreover, for human-caused hazard agents there are "nuclear," "hazardous material," and "terrorism" COIs and CoPs (and terrorism itself is fragmented into a variety of subinterest communities—border security, immigration control, bioterror, cyberterror, intelligence gathering, infrastructure protection, etc.), as well as several more.

Conversely, some existing theories, risk analysis theory for example, may be appropriate and applicable regardless of hazard type. Some theories from economics, including public finance, public budgeting, and welfare economics, may have suitable applicability regardless of the type of hazard agent that caused or initiated the disaster. Certain sociological and communications theories may have all-hazard utility as well.

Regardless, some differentiation of type of hazard and location of damaging effects seems necessary in order that recovery theory break out appropriate categories of intermediate theory. These may become nested theories within a broader master theory or they may stand independent. There are different social scientific theories, either positivist (scientifically objective and behavioral) or normative (incorporating values), which offer varying degrees of explanatory power when applied to different types of hazards that carry disaster potential. Democratic, bureaucratic politics, social choice, principal-agent, network, and complexity theories may all have a place.

What are the barriers to recovery? There are an immense number of barriers in disaster recovery: government versus private sector disputes over property rights versus the public interest, legal liability issues, cost incidence (to whom will the costs of recovery ultimately be shifted and ultimately absorbed and what recourse do other parties have in escaping these costs?), migration of individuals and families away from the zone of damage, the permitting required to undertake major capital reconstruction whether public or private, and so on.

Disaster Recovery Theory and Local Economics

There are both formal and informal economies in communities. These are affected by disasters and often deserve reconstitution in some form in the wake of disaster. Also, social conditions may shape economic recovery. Not to be overlooked is that informal economies may be an essential part of a local community.

Disasters affect household economics, sometimes in profound ways. Those who provide disaster relief to households must understand how household economics were managed before the disaster, as well as how they are managed, or were managed, after the disaster. It is important in the sequencing of aid that the correct form of relief is offered at the correct time. Recovery is a measurement of household losses and disaster costs. Recovery involves planning of, and appropriate design and application of policy instruments that equitably and fairly facilitate household recovery.

Disaster recovery researchers often overlook "quality of life issues" for those affected by disasters. What does it mean when a neighborhood loses a beloved public school, recreation center, or library? Disaster recovery theory also needs to grapple with the issue of valuing the services that the environment produces in natural ways for humankind. Major damage to the natural environment may affect local livelihoods, flood abatement, agriculture, forestry, potable water sources, as well as local plant and animal life.

Recovery resources and activities inside an impacted community must be harmonized and reconciled with the recovery resources and activities introduced to the impacted community from the outside.

There is also the matter of "public economics." Governments affect the climate or environment of business by providing incentives and disincentives for various types of business activity. Governments establish laws and rules that regulate business and trade. Governments use taxes as much as direct public spending to encourage or discourage various business behaviors as well as to regulate private markets on behalf of both consumers and business in general.[20] All of this is directly relevant to a theory of disaster recovery for house-holds. Taxation, particularly through broad gauged measures like property, sales, and income taxes, is a way in which "the many may subsidize the few." Ideally, the economic sacrifice imposed on the many should be light while the benefits disbursed to the few (say those in disaster-ravaged communities) may be substantial. However, economic recovery within any governmental jurisdiction depends on willingness-to-pay and ability-to-pay questions. Many states lack willingness to pay for and create state disaster relief programs that parallel those of FEMA—even when those states have the means to do so. Yet it is also true that many states and localities lack ability to pay for pre-disaster mitigation endeavors that would serve a public interest owing to their chronic economic conditions.

In these economic terms, what is a successful disaster recovery, and will we know it when we see it? A successful disaster recovery may be one that redresses historical issues. Consider the Tennessee Valley in the United States. Before the 1930s, the valley was long vulnerable to repeated major flooding. The Tennessee Valley Authority (TVa), a federal regional agency, engineered and built flood control projects, through fundamentally structural flood mitigation solutions, which helped advance the entire regional economy of the valley. Construction of the massive system of flood works and hydroelectric generation stimulated local businesses and created tens of thousands of jobs in a region then economically depressed. Economic revival was one of President Franklin D. Roosevelt's express purposes: the TVa projects produced major public goods and foremost improved flood abatement and hydroelectric power that generated low cost electricity in abundance and new recreational lakes from water impoundments created by the dams.

Disasters create economic winners and losers. Some economic sectors lose while others gain. Disasters often redistribute wealth such that impacted communities are poorer while nearby unaffected communities gain at the damaged community's expense. In another sense, the economic stimulation that outside funding, investment, and in-kind contributions provide often has a beneficial economic multiplier effect for the recovering locality.

Yet government officials are challenged to appropriately read market signals. In certain periods, outside direct cash and in-kind assistance is essential in both response and short-term recovery. However, it is also true that

sometimes outside cash and in-kind assistance offered for too long seriously slows the revival of the local economy as people will tend to prefer the "free" goods offered as disaster relief over paying for locally produced products as they did before the disaster. Government disaster recovery needs to be adept at gradual scale-down and disengagement.

Local (and sometimes even regional and national) economics are affected by public perception. People want reassurance that public safety is being maintained.

Few businesses are more interlaced with matters of disaster and disaster recovery than is the business of private insurance. Almost every line of insurance involves risk from disaster-induced loss at primary, secondary, or tertiary levels. However, insurance involves matters of valuation and indemnification. How much is a life worth? How much insurance does one need to purchase to be adequately covered against exigencies; remember that "adequately covered" relates significantly to the ability to recover from disaster economically, whether a large or small business, a public entity, a nonprofit, or a family.

Disasters may entice businesses to relocate from a damage zone. Another dilemma for businesspeople in disaster recovery is deciding whether or not to let a business fail after a disaster. Often if the business was already failing "before" the disaster, the decision to cut losses via shutdown or relocation may seem appropriate. Some businesses are too marginal to properly insure themselves against the costs and losses a disaster can impose. Perhaps a theory of disaster recovery needs to imbed a triage system in which the following occurs:

- Businesses that would have most likely failed and that have little chance of recovery regardless of financial assistance, should be left to declare bankruptcy if they so choose.
- Businesses that were "not failing" before the disaster but that would surely fail without post-disaster financial aid would deserve and receive public assistance.
- Businesses that were healthy, adequately insured, and likely to rebound without financial aid should receive little or no public financial aid.

The scale of the disaster needs to be compared to and contrasted with the scale of the firm affected. Government post-disaster aid to business is often conditional: it may come in the form of loans, loan guarantees, tax abatement, etc. Insurance claims filed for physical loss, business interruption, workmen's compensation, and so forth, may assist firms that were covered by these policies before the disaster.

Few would contest that for-profit firms play major roles in disaster economic recovery but so, too, do nonprofit organizations (see Chapter 6). To what extent do results and findings of disaster recovery hypotheses testing reveal unmet needs of disaster recovery? Because NGOs often work to address unmet needs created by gaps in conditions of governmental disaster relief, a sound theory of disaster recovery should examine the record of NGO performance in disaster recovery.

Sound recoveries involve hazard risk management and hazard risk reduction. Resilience in economic terms involves pre-disaster surpluses and shortages. Resilience also relates to actions taken during recovery.

Several variables are key in developing metrics of disaster recovery, including rules, systems, values, scales, interest, time frames, infrastructure, and process. These involve a variety of dimensions and contexts. A sound theory of disaster recovery would be one that compiles information on these variables in an integrated way. If disaster recovery is very much a matter of correcting imbalances, what barriers affect the variables important in disaster recovery? How can the identified imbalances be corrected? Did a recovery succeed because it was conducted rapidly (time, time frames)? Was the recovery well conceived methodologically (process, scaling)? Was recovery made possible by properly engineering rebuilding (infrastructure)? Was the recovery achieved because it manifested sustainability features (systems, process, values)? Did it succeed because it was not obstructed by regulation (rules)? Or did it triumph owing to its responsiveness to the needs of disaster victims of all types and circumstances (values, interests)?

Is disaster recovery radical and transformative, or is it inherently conservative, as determined by insurance payouts and relief aid that returns disaster zones to their near exact pre-disaster economic conditions? Disaster recovery in

some places may rest on a conservation strategy of "pick up the pieces" and let's figure out how to keep going. Deciding whether a recovery is radical, transformative, conservative, or minimalist is a matter best left to local people and local authorities in a damage zone.

The work invested in developing a worthwhile theory, or set of theories, about disaster recovery promises important long-term payoffs. The NDRF provides a platform for potential disaster recovery stakeholders to advance plan customized recovery. It also creates a realm of analysis for disaster researchers contributing to disaster recovery theory building.

Disaster Victims and Clients as Customers

This chapter opened with a review of Jeffersonian-oriented emergency management. Owing to the professionalization of emergency management, the Hamiltonian perspective was shown to be gaining ascendance over the Jeffersonian approach. Regardless, the rise of the reinventing government movement in the 1990s and the modern management consultant conclusion that organizations need to rediscover the importance of customer satisfaction, have given Jeffersonian and Jacksonian emergency management reinvigoration.

Increasingly, customer satisfaction has become a focus of emergency management.[91] The Clinton-era reinventing government effort offered low-level administrators more power. However, low-level administrators must have the training and experience necessary to assume more responsibility. Under James Lee Witt, FEMA assiduously embraced the reinvention movement. Customer satisfaction in government work has a ring of Jeffersonianism and is something relished by Jacksonian emergency managers as well. Clearly, no agency or profession can afford to ignore customer satisfaction very long without losing credibility, clients, and positive public reputation. However, although customers may help professionals identify unmet needs, in no profession do customers actually define the nature of professional work.

Still, if emergency managers are judged to have failed in meeting the legitimate needs of people seeking post-disaster government aid, then they have also failed in the criterion of customer satisfaction. Policy analysts have been slow to recognize the utility of customer satisfaction studies in measuring the effectiveness of government disaster assistance programs. The failures of FEMA and a host of other state and local emergency management organizations in the days and weeks after Hurricane Katrina struck in 2005 impelled Congress to launch a host of investigations about why victims' needs were not addressed faster and more effectively. One lesson relearned by emergency managers after the Katrina debacle is the importance of public responsiveness and customer satisfaction. Catastrophic disasters produce a vast array of citizen (and subnational government) needs. Meeting those needs expeditiously and competently is a daunting challenge to emergency managers.

Knowledge Codification and Knowledge Diffusion Issues

The experience and actions of any organization are based on a blend of tacit, or uncodified (unwritten), knowledge and structured, or codified, knowledge. Tacit knowledge (acquired by observation, practice, experience, mentoring, etc.) is vague and ambiguous and depends on sharing expectations and values through social relationships. Codified knowledge, meaning written knowledge, is impersonal and learned through thinking and reasoning, not social relationships. To manage well, do emergency managers need to operate in face-to-face forums (that are consensual, democratic, Jeffersonian, and based on tacit knowledge)? Or might they achieve their goals by imparting technocratic knowledge, which is produced from data analysis, repeated experimentation, scientific study, Hamiltonian behavior, and codified knowledge?

This may depend on whether codified knowledge is diffused or undiffused knowledge.[92] Diffused codified knowledge is written down and openly available so that audiences outside government can use it. If knowledge is codified but not diffused, it sits contained within the bureaucracies. Someone could master this knowledge only if he or she worked inside the bureaucracy and learned internal rules and unique types of information. If knowledge is diffused but not codified, those entering public management positions from the outside stand little chance of coordinating the work of others, unless they receive help from those inside or they have the time to learn the uncodified information as government employees. To succeed under conditions of diffused, tacit knowledge, a public manager needs to "learn the agency." Managers would have to learn from mentors.

Unfortunately, a considerable share of federal emergency management knowledge, if recorded at all, is partially codified but not sufficiently diffused beyond the agency. The U.S. Code of Federal Regulations sets forth the core rules of federal emergency management, but it does not elucidate the essence of what emergencies and disasters are and it does not explain how to actually do emergency management work.[93]

Some federal emergency managers have codified their expertise, but much of this information resides within the bowels of various agency offices; a possible exception is the National Emergency Training Center within DHS-FEMA, which disseminates codified emergency management knowledge and trains state and local authorities and managers. However, according to former FEMA attorney William Cumming, "the real disaster tradition was oral, not in writing, and ad hoc rather than procedural."[94] Moreover, FEMA and its progenitor agencies lacked "history divisions" (common at the Department of the Army, U.S. Department of Energy [DOE], Nuclear Regulatory Commission [NRC], the National Aeronautics and Space Administration [NASA], and other departments and agencies) or institutional memories that were more than merely the recollections of employees who have worked there.

A fiefdom or cult of personality results when management knowledge is both uncodified and undiffused (inaccessible) or kept secret by government classification. Such may have been the case in J. Edgar Hoover's Federal Bureau of Investigation (FBI) many years ago. Management control then becomes highly personalized, unreviewable, and not appealable. Some fear that the advancement of emergency management largely depends on high-profile, charismatic figures chosen to lead agencies like FEMA or state and local emergency management agencies. If emergency management know-how depends heavily on a cult of personality, there is little hope emergency management will be professionalized.

In uncodified but diffused situations, clans are the norm and people learn by being socialized. Those selected to join the U.S. Diplomatic Corps face this type of situation. Diplomatic histories are many but inadequate to train potential diplomats. Before they are officially entrusted to do U.S. diplomatic work, new diplomats must be socialized to the State Department's way of doing things.[95] Certain first responder emergency management occupational specialties (fire services and law enforcement), too, put great emphasis on socialization and mastery of tacit knowledge and of codified knowledge not widely diffused to those outside the occupational specialty.

If emergency management is basically learned through apprenticeships within emergency management agencies, few in the academic profession will be drawn to the field. If that is the case, the growth of the field of emergency

management will be a function of in-house training, not of broadly based advancement of emergency management education and published research.

Summary

This chapter furnished an overview regarding how and where theory knowledge might contribute in the evolution of emergency management as a profession. It also demonstrated how people new to the field can draw from this chapter's theories and concepts to independently analyze disaster policy as a domain of public policy.

The chapter began by summarizing three simple normative theories: Jeffersonian, Hamiltonian, and Jacksonian. Hamiltonian theory and assumptions hold out the best prospect for professionalizing the work of emergency management. However, Hamiltonian emergency management embodies an authority of expertise for emergency managers. They must learn and apply a growing body of knowledge—some of it practical knowledge and some of it academic knowledge. Jeffersonian theory has many laudatory features in that it rests on public participation, public assent, democratic principles, and local priorities. Jacksonian theory has a place insomuch as it applies well to the current politicized environment of disaster policy, emphasizes state and local control, and demands a new order and style of emergency management leadership.

Bureaucratic politics and matters of administrative culture permeate emergency management and disaster policy in the United States. Understanding models and concepts of bureaucratic politics helps one analyze power relationships in disaster policy and management. Also hugely important is intergovernmental relations theory. Owing to the U.S. system of relations between federal, state, and local governments and because other parties outside of government are heavily involved in "governance" of this policy domain (for example, non-profit organizations active in disasters, corporately owned utilities, special district governments, and armies of trained volunteers), intergovernmental relations is one of the most critical components of disaster policy. This is true both in the formulation and implementation of that policy.

Principal-agent theory, network theory, and complexity theory were briefly examined as potential worthwhile theory tools for both analyzing and conducting emergency management. The chapter also included a review of topics ranging from customer satisfaction to a commentary about how emergency management knowledge is produced and how it is learned by others.

Key Terms

Chapter 3 Historical Trends in Disaster Management

President Harry S. Truman Inspecting Damage Caused by a 1951 Flood along the Kansas River in Kansas City, Kansas. Truman, Like Many Presidents before and after, Tend to Visit Disaster Sites to Demonstrate Compassion and to Symbolize Federal Responsiveness for those Affected. An Added Incentive for Truman was that Kansas City was his Home Town. Owing Significantly to Increased TV News Coverage of Disasters, Future Presidents would Often Visit Such Sites.

(Source: Getty Images.)

ORDINARILY, THE POLICY PROCESS ASSUMES THAT POLICYMAKERS identify a problem. If they choose to define it as a "public problem," lawmakers begin a process of policy formation in which various

solutions to the problem are put forward, often in the form of legislative measures. Various political interests establish positions on these measures, and a process of coalition building takes place among legislators. The president and some officials of the executive branch may engage in the policy formation and policy adoption process by exercising political influence or by contributing to the hearing process. Legislators ultimately vote on proposed measures to address the problem, and once a policy is adopted, often through enactment of a law, institutional resources and spending authority are provided to implement the law. This is the "textbook" idealization of the policy process. Many federal disaster laws have emerged by way of this general process over the years.[1]

However, history demonstrates that the president and other policymakers regularly have to decide how to manage different types of disaster and what the subsequent role of the federal government will be. In some acute and unforeseen new type of disaster or in certain emergency circumstances when a legislative determination proves to be too slow, cumbersome, and costly to rely on, presidents are entrusted with deciding whether a national interest exists and if so how the federal government will respond. Presidential executive orders sometimes provide the president and the federal government a high-speed, highly responsive alternative to the conventional policy process. The president's freedom and creative use of disaster declaration authority is another important and available tool.

Thus, presidents often lead in the formulation and legitimation of disaster policy. Presidents are chief executives, and many presidents have either by choice or by the press of emergency circumstances used their executive authority to move the federal government to address new emergencies, disasters, and exigencies.

This chapter tracks the role and actions of presidents in the formation and implementation of disaster policy. Specific disaster-related laws and policy trends, as well as actual major disasters that have been factors in the enactment of these laws or contributors to these policy trends, are examined. The theme of federal-state and intergovernmental relations in disaster issues is another matter worthy of attention, as are matters of civil defense and civil-military relations. In many ways the continuum set forth in this chapter reveals the antecedents of twenty-first-century homeland security.

The Cold War and the Rise of Civil Defense

Continued testing of atomic weapons by the United States after the end of World War II and the Soviet Union's successful test of an atomic bomb in 1949, the Soviet occupation of Eastern Europe, and a growing rivalry and competition between the United States and the Soviet Union opened the Cold War, which lasted forty-four years. Civil defense against nuclear attack became a principal focus of U.S. disaster management. President Harry S. Truman's administration (1945–1953) and congressional lawmakers prepared Americans for the possibility that the nation might be attacked by atomic weapons, and they pressed for improved civil defense preparedness. Ironically, the escalation of the Cold War drew federal policymakers to the issue of disaster preparedness for the civilian population. Several landmark federal disaster laws and policies originate, for better or worse, from the Cold War and the related concern of civil defense against nuclear attack.

The Civil Defense Act of 1950

Congress enacted the Civil Defense Act of 1950, a measure that placed most of the civil defense burden on the states. The act created the Federal Civil Defense Administration (FCDA), which was to formulate national policy to guide the states' efforts.[2]

Congressional resistance to paying for a comprehensive program, and concerns about establishing public dependency on government, led to adoption of a doctrine of self-help: individual responsibility for preparedness to minimize (although not eliminate) risk. The idea of decentralized, locally controlled, volunteer-based civil defense was not new; in fact it was the foundation of the successful British civil defense effort in World War II. Still, the decision to make self-help the basis of civil defense was a political compromise, a way to balance conflicting views over the size, power, and priorities of the emerging postwar nation.

The Civil Defense Act of 1950 allocated significant funding to a shelter initiative. The FCDA-led shelter-building programs, sought to improve federal and state coordination, established an attack warning system, stockpiled supplies, and started a well-known national civic education campaign.

The political, fiscal, and emotional crosscurrents were reflected in civil defense funding. Despite ambitious funding requests, actual appropriations to civil defense remained low throughout the Truman administration and throughout the 1950s.[3]

The Federal Disaster Relief Act of 1950

The Federal Disaster Relief Act of 1950 was a companion measure of the FCDA. As typical after major disasters that grab national attention, the Disaster Relief Act of 1950 was passed as a limited federal response, in this case to flooding in the Midwest. However, this law was anything but "ordinary." The new law set forth a framework and process that carried the nation through more than sixty years of disaster experience. Much of that framework and process is embedded within or underpins major federal disaster laws that followed and that are still in effect today. The act provided "an orderly and continuing means of assistance by the Federal government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage resulting from major disasters," including floods. It created the first permanent system for disaster relief without the need for congressional post-disaster action. It also clearly stated for the first time that federal resources could and should be used to supplement the efforts of others in the event of a disaster. The new law made federal disaster assistance more immediately accessible, because it no longer required specific congressional legislation to address each new disaster but instead simply allowed the president to decide when federal disaster assistance was justified and necessary.

Policymakers of the era did not consider the Disaster Relief Act of 1950 as precedent setting. They did not intend the measure to go beyond earlier disaster legislation efforts. Only later did congressional leaders begin to see the 1950 act as precedent setting and as an early, general, national-level disaster policy model.

The Disaster Relief Act of 1950 put in place a standard process by which governors of states could ask the president to approve federal disaster assistance for their respective states and localities. It set precedents by establishing a federal policy for providing emergency relief, by laying out national governmental responsibility in disasters, and by transforming the intergovernmental context of disasters. In effect, it set up a framework for government disaster assistance that invests immense and broad authority in the president.

Dual-Use Preparedness Programs

Through the 1950s civil defense preparedness continued to evolve. Civil preparedness emergency management and the policy options associated with it were in great measure influenced by foreign policy and weapons technology matters. Certain foreign policy conflicts between the United States, its allies, and the Soviet Union and its allies that came to diplomatic or military boiling points pressed American presidents to take various civil defense countermeasures on the home front. Moreover, as atomic weapons of the 1940s became thermonuclear weapons of the 1950s and beyond, their destructive capacity increased by many orders of magnitude. Over the years nuclear weapons became smaller and more easily delivered to their targets by ever more sophisticated ballistic missiles carried on submarines and military aircraft or launched from hidden land-based silos.[4] Over time certain civil defense options proved ineffective or infeasible and new ones were proposed.

President Dwight D. Eisenhower (in office from 1953 to 1961) advanced a mass evacuation policy instead of the shelter program initiated under Truman.[5] President John F. Kennedy (in office from 1961 to 1963) emphasized the importance of home, school, or workplace fallout shelters as a means to save lives.[6] Owing to the escalation of the war in Vietnam, President Lyndon B. Johnson (in office from 1963 to 1969) put civil defense against nuclear attack on a back burner.[7] Attention to civil defense in the Johnson administration was also undermined by a series of major natural disasters that rattled the nation. Hurricane Hilda struck New Orleans in October 1964, and Hurricane Betsy devastated the Southeast in August 1965; a catastrophic Alaskan earthquake transpired in 1964, and a lethal tornado swept through Indiana on Palm Sunday in 1965.

In response, Sen. Birch Bayh, D-IN, sponsored legislation that granted emergency federal loan assistance to disaster victims. The bill passed in 1966, and Bayh urged Congress over the next few years to provide even more disaster assistance to citizens. The concept of all-hazards assistance was gaining adherents at the expense of civil preparedness for attack.[8]

In the late 1960s President Richard M. Nixon (in office from 1969 to 1974) introduced National Security Decision Memorandum (NSDM) 184.[9] NSDM 184 recommended a dual-use approach to federal citizen preparedness programs and the replacement of the Office of Civil Defense with the Defense Civil Preparedness Agency (DCPA). Nixon implemented these recommendations, placing the new DCPA under the umbrella of the U.S. Department of Defense (DOD). Congress played a role in formulating dual-use policy through the Disaster Relief Act of 1966, a measure that linked civil defense warning systems with threats from natural disasters.[10] In 1973 the DOD determined that civil defense activities could also be used to prepare for natural disasters, "and the parallel tracks of civil defense and natural disaster management merged," into what became known as dual-use policy.[11]

After Nixon resigned from office in August 1974, President Gerald R. Ford (in office from 1974 to 1977), his successor, initially supported the dual-use approach to disaster preparedness.[12] However, Ford, after only seven months in office, rescinded the Defense Department's use of civil defense funding for natural disaster mitigation and preparedness.[13] Civil defense returned to what it was in the Truman and Eisenhower years, primarily a nuclear attack preparedness program.[14]

Ford's concern about perceived Soviet progress in civil defense, compared with modest American efforts, contributed to his belief that the United States was falling behind. Developments in Cold War diplomacy also contributed to the temporary suspension of all-hazards planning. Gradually the idea of limited nuclear strikes against strategically important military and industrial targets, rather than population centers, replaced earlier notions.

By 1978 Congress had amended the Civil Defense Act of 1950 so that it authorized funding on a dual-use basis: "to prepare for the threat of enemy attack *and* for natural disasters."[15] For the first time in the history of U.S. civil defense, federal funds previously allocated for the exclusive purpose of preparing for military attacks could be shared with state and local governments for natural disaster preparedness. This dual-use initiative assumed that

preparations for evacuation, communications, and survival were common to both natural disasters and enemy military strikes on the homeland.[16] From a practical perspective, the dual-use approach allowed planners to prepare for a broader range of disasters and emergencies.

Through the 1970s the concept of dual-use gained acceptance as the perception of nuclear threats changed and as federal resources spurred on state and local planning efforts. Over the next decade, owing to advances in nuclear weapon miniaturization and new delivery systems by both the United States and Soviet Union, flexible targeting and limited retaliation evolved into the policy of "flexible response." Flexible response was based on the idea that both the Soviet Union and the United States had the capability for small-scale nuclear attacks that could be answered by similarly sized acts of retaliation by the other side. Theoretically, instead of massive retaliation against population centers, targets would be specific, highly strategic sites. Since some of these sites could be civilian in nature, some level of civil defense and nuclear attack preparedness was deemed necessary. Thus, U.S. policymakers again emphasized civil defense as a means of protecting against targeted highly strategic attacks.[17]

One result was a new initiative called the Crisis Relocation Plan (CRP). CRP evacuation planning was conducted at the state level with federal funds and encompassed all of the necessary support for relocation, food distribution, and medical care. Under the CRP, urban residents would be relocated to rural host counties.

Vocal critics from Congress and the public doubted the feasibility of such large-scale evacuations as they envisioned horribly bottlenecked transportation routes and grossly inadequate provision for food, housing, and other vital resources at the destinations of evacuees. However, as in previous administrations, civil defense still competed for funding against more traditional military expenditures, and the 1975 increases were nullified the following year in favor of spending on offensive military capabilities. As a harbinger of things to come, in June 1976 the Working Group of the Cabinet Committee to Combat Terrorism was assigned Federal Preparedness Agency responsibility for coordination of federal and federal-state responses to terrorism.[18]

Nationwide Emergency Management

By the time President Nixon entered office in January 1969, public and government interest in civil defense had fallen precipitously from its peak in the early 1960s. President Nixon helped "redefine civil defense policy to include preparedness for natural disasters."[19] Nixon was profoundly affected by his administration's poor experience in managing the Hurricane Camille disaster of August 1969. The haphazard and bungled federal response to Camille and its aftermath was a public relations debacle for the new president.

During the Nixon era and over the course of the 1970s, the basic governmental approach to disasters began to shift from an exclusive preoccupation with structural hazard mitigation (e.g., building flood works, coastal infrastructure, dams, and other "hard" engineered structures) to greater emphasis on the use of nonstructural hazard mitigation (e.g., using wetlands to buffer against flooding, protecting coast lines and barrier islands from erosion and development, encouraging the use of landscaping that protects structures from flooding or wildfires, using other "soft" engineering approaches).

In the late 1960s and early 1970s the American environmental movement was widely popular among the public and many federal policymakers. Conserving wetlands, reducing humanity's impact on the natural environment, protecting natural habitats, and removing human structures and pollution contamination from areas where they were producing environmental damage were all tenets of American environmentalism. In many ways American environmentalism and disaster mitigation complemented one another. Often, political alliances between environmental and disaster mitigation interests produced mutual victories. For example, the U.S. Environmental Protection Agency (EPA), which began operation in 1970, had an environmental emergency response division, conducted land and water environmental research that helped reduce disaster effects, and carried out an elaborate environmental impact statement process that was relevant to disaster mitigation efforts.

> The Coastal Zone Management Act of 1972 gave states a great deal of authority to get involved in hazard mitigation planning and spawned a slew of state-enabling statutes, which required the adoption of hazard mitigation plans at the local level.[20]

Federal policy changed from merely initiating projects designed to build physical barriers to emphasis on keeping people and structures out of hazard-prone, high-risk areas by encouraging local governments to develop improved disaster mitigating zoning laws, building codes, and land-use regulations. Thus, national environmental and disaster policies combined to press more people and officials of state and local government to assume greater responsibility for where and how people lived.

Such lifestyle-changing policies, however, often created disputes between levels of government and between the government and the public. At one end of the spectrum was a growing sentiment among many federal, and various state, officials that their governments should not have to "bail out" localities that do not proactively protect themselves from known hazards through the use of improved zoning laws, building codes, and land-use restrictions. At the other end were resentful local officials and citizens who saw such measures as unnecessarily burdensome. They sometimes argued that such measures restricted their personal freedom, diminished their private property rights, and were costly for them to obey. Many state and local officials also feared federal encroachment into a policy domain they perceived as within traditional state and local government jurisdiction or as a matter of powers reserved to the states under the U.S. Constitution. A perennial worry of American local government officials has been fear of federal zoning. Local people have often noticed that federal involvement tends to gradually, or sometimes spectacularly, increase over time. Local control over land-use, zoning, and building regulation is often subject to erosion by both the state and federal governments. Consequently, federal and state government disaster policymakers have had to find subtle and uncontroversial ways to press local government officials to recognize their jurisdiction's hazard vulnerability and to act responsibly to address it (see the "History's Lessons" box).

History's Lessons: Too Many Different Players?

From the 1950s to the end of the 1970s, problems arose because many federal disaster management responsibilities were parceled out to different federal agencies and offices. Disaster policy was fragmented, and this often generated complaints and criticisms when mega-disasters challenged federal authorities. The ensuing lack of leadership and coordination was compounded because responsibility for disaster relief at the federal level seemed at times to bounce from one agency to another. These problems had a tendency to complicate and confound state and local emergency management.

For example, between 1951 and 1973, disaster assistance and relief activities were the responsibility of four different federal agencies (see Table 3-1).

Some of this paralleled what would happen later. The terrorist attacks of 2001 impelled policymakers to again reorganize emergency management. The enactment of the Homeland Security Act of 2002, a series of Bush administration presidential homeland security directives, and other policy changes squeezed a relatively tiny FEMA into a giant "holding company" of big and small organizations, few with explicit emergency management duties.

Before 1979, federal emergency management was fragmented and lacked an integrated identity; yet in 2003, when FEMA, an independent federal agency, was folded into the Department of Homeland Security (DHS), federal emergency management lost much of the integrated essence that it had acquired in the intervening years. It was not simply that FEMA was absorbed into DHS. In point of fact, FEMA was for a period of years pulled apart as top DHS officials tried to bind and refashion all of the DHS so-called legacy agencies into one administrative whole whose primary mission would be preventing acts of terrorism and helping the nation prepare for and respond to a terrorist attack. In the beginning, DHS top-level administrators saw their job as one of melding the assortment of transferred organizations into a new bureaucratic structure aligned to address the mission of preventing or coping with terrorism in the homeland, first and foremost. What this reasoning may have dismissed out of hand was that each of these agencies was never relieved of their original legal and program responsibilities.

Table 3-1 Federal Emergency Management Organizations

Table 3-1 Federal Emergency Management Organizations

Organization	Dates
Housing and Home Finance Administration	1951–1953
Federal Civil Defense Administration (FCDA)	1953–1958
Office of Civil Defense and Mobilization	1958–1961
Office of Emergency Planning (renamed Office of Emergency Preparedness)	1961–1973
Federal Disaster Assistance Administration, Defense Civil Preparedness Agency (DCPA), and Federal Preparedness Agency	1973–1979
Federal Emergency Management Agency (FEMA) (independent agency)	1979–2003
U.S. Department of Homeland Security (DHS), FEMA	2003–

Before 1979 no federal agency embraced as its core mission disaster management in all of its phases and manifestations. After 2002 the only agency whose core mission was disaster management, FEMA, found itself in a superdepartment whose officials would attempt to transform it into a counterterrorism and terrorism consequence management body.

Ironically, despite its much maligned handling of the Hurricane Katrina disaster in 2005, Congress gave FEMA reinvigoration through the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006. What DHS officials had taken from FEMA before was largely returned to the agency under provisions of PKEMRA.

Meanwhile, the Nixon administration made a host of organizational changes in federal disaster management.[21] In total, the new Nixon's emergency management bureaucratic structure placed responsibility for disaster relief with more than 100 federal agencies.[22] All these shifts of administrative authority may seem trivial and confusing. What is important is that there was no central administrative identity for federal emergency management over the Nixon and Ford years. Various stakeholders and interest groups associated with policies other than natural and human-caused disaster policy managed to keep their respective pieces of disaster policy where they wanted them and did so ostensibly with White House and congressional consent. Housing, defense, insurance, business regulation, transportation, and other interests jealously retained control of their disaster-relevant jurisdictions.

The Disaster Relief Act of 1974

In May 1974 President Nixon signed into law the Disaster Relief Act of 1974, a measure that sought to remedy the bureaucratic confusion created by the administration's earlier reorganizations. The new law also, for the first time, created a program that provided direct assistance to individuals and families following a disaster. From 1950 to 1974, federal post-disaster relief had been more generous to state and local governments than it had been to victims of disaster. Although preceding laws had provided temporary housing aid and other modest forms of individual assistance, the new Individual and Family Grant (IFG) program, renamed and refashioned as the Individuals and Households Program (IHP) in 2002, finally bridged the gap that had existed between public and individual assistance.

Budgeted funding for these programs remained low, however. The original Disaster Relief Act of 1950 had the effect of minimizing congressional involvement in federal post-disaster relief. However, inadequate annual funding of the president's Disaster Relief Fund, a main repository of federal post-disaster spending authority, meant that Congress would often be forced to approve emergency supplementary appropriations within a budget year to replenish the fund's spending authority. This often had the effect of re-politicizing disaster policy and implementation.

The Disaster Relief Act of 1974 brought state and local governments into all-hazards preparedness activities and provided matching funds for their emergency management programs. The act also authorized in law the emergency declaration category; a measure triggered by the federal government's 1972 experience with Hurricane Agnes.[23] Presidents Truman, Eisenhower, Kennedy, and Johnson, serving before 1974, could only issue declarations of major disaster. Remember, when governors ask the president to issue their state and localities an emergency declaration, they do not have to conduct a damage assessment or otherwise document need as they do when they ask the president to issue them a major disaster declaration. Granting the president authority to issue emergency declarations opened the door to president-approved proactive federal mobilization for disasters that had not yet transpired but appeared imminent. It also increased the temptation of presidents to issue declarations for events that would ordinarily not meet damage thresholds administratively set for major disaster declarations.

The 1974 law recognized the need for improved disaster mitigation. It required states and communities receiving federal disaster assistance to "agree that the natural hazards in the area in which the proceeds of the grants or loans are to be used shall be evaluated and appropriate action shall be taken to mitigate such hazards." These provisions represented the first congressional mandate for hazard mitigation as a precondition for federal disaster assistance. Many hoped that the emphasis on disaster mitigation would save lives and protect both public and private property.

The 1974 act was precedent setting in its own right. Among its features were the following:

1. instituted the IFG program, which supplied 75 percent of the funding for state-administered programs providing cash help for furniture, clothes, and essential needs
2. formalized efforts to mitigate, rather than simply respond to, disaster events
3. mandated that local, state, and federal agencies develop strategies aimed at preventing disasters in the future
4. stressed a multi-hazard approach to disasters, in which the government would manage all kinds of hazards, rather than maintaining unique and separated capacities to deal with different types of disaster agents

In effect, disaster management would be all-hazard generic to the extent possible so that capacities to address one type of disaster agent could be applied to address a variety of types. An all-hazards approach would help reduce duplication and redundancy in emergency management. It would encourage cross-training of emergency responders, and it would encourage adaptability. It would also integrate functions and disaster types, providing more coherence for the field and the profession.

The 1974 law also advanced multi-hazard, or all-hazards, approaches to emergency management. This implied that before 1974 emergency management was fragmented and preoccupied with confronting individual disasters

or specific types of disasters as if each disaster were unique or as if each category or type of disaster had its own independent set of response needs. Also, by emphasizing a multi-hazard approach, the Disaster Relief Act of 1974 signaled the diminution of civil defense issues, funding, and concerns in the realm of domestic emergency management. However, the bureaucratic rivalry between civil defense and emergency management officials would not end for twenty more years, when in 1994 the Federal Civil Defense Act was subsumed via amendment into Title VI of the Stafford Act.[24]

The Birth of the Federal Emergency Management Agency

Few presidents are more associated with disaster policy than President James Earl Carter (1977–1981).[25] He is justifiably credited with establishing the Federal Emergency Management Agency (FEMA). As a former governor of Georgia, Carter knew natural disasters well, and he was anxious to respond to the calls of other governors and the National Governors Association for improvements in the organization of federal disaster management.

FEMA had its origins in proposals put forward by the National Governors Association in the late 1970s and a 1978 working group formed by President Carter. In 1978, civil emergency management programs and activities were scattered among five principal federal departments and agencies. Using authority allowing him to reorganize the executive branch, President Carter presented Reorganization Plan No. 3 of 1978 to Congress for its approval in June.[26] President Carter had specific aims in Reorganization Plan No. 3:

1. to establish a single entity (FEMA), headed by an official directly responsible to the president that would serve as the sole federal agency responsible for anticipating, preparing for, and responding to major civil emergencies
2. to develop an effective civil defense system, integrated into the programs and operations of nonfederal entities, to improve communications, evacuations, warnings, and public education efforts to prepare citizens for a possible nuclear attack as well as for natural and accidental disasters (an all-hazards approach)
3. to rely on federal agencies to undertake emergency management responsibilities as extensions of their regular missions and on FEMA to coordinate these resources
4. to incorporate federal hazard mitigation activities, linked with state and local activities, into preparedness and response operations.[27]

In the reorganization, FEMA absorbed the Federal Insurance Administration (FIA) (implementer of the National Flood Insurance Program [NFIP]), the National Fire Protection and Control Administration, the Federal Preparedness Agency of the General Services Administration (GSA), and the Federal Disaster Assistance Administration that had resided in the U.S. Department of Housing and Urban Development (HUD). The DCPA at the Pentagon had its civil responsibilities transferred to FEMA as well.[28]

The Carter plan proposed transferring civil preparedness programs, fire prevention and control, flood insurance, crime insurance, dam safety, earthquake hazard reduction, terrorism, and national emergency warning systems to this new agency and giving it primary responsibility for mobilizing federal resources, coordinating federal efforts with those of state and local governments, and managing the efforts of the public and private sectors in disaster responses.[29]

Following congressional acceptance of Reorganization Plan No. 3, the new agency opened for business on the inauspicious date of April 1, 1979.[30] President Carter then issued an executive order in July that delegated most of the authority granted to the president under the Disaster Relief Act of 1974 to the director of FEMA. The order also transferred to FEMA various functions previously carried out by the DOD, HUD, and the GSA, as well as by other federal entities. Also, the director of FEMA was delegated authority to establish federal policies for all civil defense and civil emergency planning, management, mitigation, and assistance functions of executive branch agencies. One section stipulated, "The Director shall be responsible … for the coordination of preparedness and planning to reduce the consequences of major terrorist events."[31] In August 1979 John W. Macy won Senate confirmation as the first FEMA director.[32]

The new agency ultimately absorbed civil defense, certain elements of national emergency preparedness, fire prevention and assistance, disaster relief, flood insurance, earthquake hazards reduction, and dam safety. Under Carter, the new FEMA did not fully consolidate all federal disaster and emergency functions and programs. Consequently, federal agencies continued to compete for jurisdiction over disaster and emergency management. For example, disaster loan programs operated by the U.S. Small Business Administration and by the U.S. Department of Agriculture (USDA) Farmers Home Administration were not transferred into FEMA, and both

continue operation today.

How Things Work: "Civilianizing" the Federal Emergency Management Agency?

An intriguing political issue that arose during FEMA gestation involved the transfer of civil preparedness activities from the Pentagon to FEMA. Many questioned how important civil defense would be within FEMA. If civil defense were to be under the umbrella of the new FEMA, how would national security aspects of civil defense, particularly preparedness for nuclear attack, be addressed? Nuclear attack civil defense officials and domestic emergency management officials regularly fought or disagreed over management, funding, operations, and personnel issues. At times, the FEMA public image suffered as various lawmakers and journalists alleged that the agency maintained an overly large and influential "secret" side: a side dedicated to certain national security concerns, such as continuity of government, national emergency communications, and maintenance of a set of secret underground facilities to be made available to the president and Congress during national emergencies.[33]

As mentioned previously, in the late 1970s, state and federal officials, as well as governors and their National Governors Association, began to acknowledge the need to plan for disasters generically, rather than as separate incident types or as unique events. Many advocated an all-hazards approach to emergency management. Many hoped that the consolidation of so many important disaster management duties and functions in FEMA would achieve federal all-hazards emergency management. Yet, in combining national security work and traditional domestic emergency management work, each often working together awkwardly or not at all, the young FEMA gravitated toward an all-hazards approach to emergency management in a somewhat schizophrenic way.

The nuclear accident in late March 1979 at Metropolitan Edison's Three Mile Island Unit 2 nuclear power plant, located south of Harrisburg, Pennsylvania, changed federal emergency management. Although the incident did not result in a presidential declaration of a major disaster, it did persuade President Carter to quickly put FEMA into operation. The slow response, miscommunications, lack of decisive leadership, and poor coordination of the federal Nuclear Regulatory Commission (NRC) with the utility, the state of Pennsylvania, and affected localities, demonstrated to policymakers the need to improve disaster response, coordination, and planning. Reacting to vociferous public criticism of the NRC, Carter assigned to FEMA some of the NRC emergency planning duties for areas surrounding nuclear power plants, a duty previously under the NRc exclusive jurisdiction.[34]

At the time, the creation of FEMA represented the single largest consolidation of civil preparedness efforts in U.S. history. Practical plans continued to reflect traditional civil defense programs, although Carter did urge FEMA to direct more of its efforts to coping with peacetime disasters. Evacuation continued to be the focus of federal planners, and Secretary of Defense Harold Brown maintained crisis relocation strategies. When FEMA assumed responsibility for citizen preparedness, the agency called on civil defense planners nationwide to create area-specific CRPs. The Carter administration's focus on evacuation was very much affected by Cold War diplomacy of the late 1970s. The continuing Strategic Arms Limitation Talks with the Soviet Union created a conflict between the president's desire to advance U.S. civil defense and his desire to avoid upsetting the delicate strategic balance required for successful threat-reduction negotiations. President Carter continued to support evacuation policies, believing that this offered the best option for the nation.[35]

Thus, owing to continuing civil defense against nuclear attack concerns and the Three Mile Island nuclear power plant accident, President Carter concluded that it made sense to allow the new FEMA to include nuclear attack and nuclear power plant incident response and preparedness in its mission. FEMA was fundamentally a civilian agency that included a variety of national security duties and responsibilities. Many FEMA officials held security clearances that allowed them to do double duty. In other words, they could work in both civilian and national security domains. Sometimes natural disasters would pull the FEMA national security program staff into handling necessary civilian tasks. Conversely, sometimes national security incidents or crises would pull the FEMA security-cleared civilian workers into working for the agency's national security programs.

By May 1980, FEMA had adopted a fund-matching policy that required state and local governments to agree to pay 25 percent of the eligible costs of public assistance programs, though emergency housing IFG remained fully federally funded. Prior to this time, the required nonfederal contribution was subject to negotiation between FEMA and the affected state and local governments. Still, since 1950, presidents have remained free to waive part or the entire "state-local" match for any declaration they issue, despite the 25 percent fund-matching rule (see the "How Things Work" box).

Disaster Declaration Issues

Over the period 1981 through 2001 the federal government increased its subsidization of state and local disaster response and recovery costs. Federal disaster outlays spiraled upward over the period from 1980 to the present.[36] Chapter 4 will examine presidents and their disaster declarations in greater detail.

In April 1986, FEMA proposed changing the process of declaring disasters, the criteria for eligibility for federal assistance, and the nonfederal responsibility for major disasters.[37] The proposed regulations would have decreased the federal share of disaster costs to 50 percent from 75 percent. Furthermore, states would have been required to meet certain economic criteria before they would be eligible to receive federal assistance and they were expected to increase their cost-sharing responsibilities, along with that of their local governments, for disaster assistance. Due to strong opposition in Congress, FEMA subsequently withdrew the proposed rules.[38] In 1993, Congress amended the law to prohibit the use of only arithmetic formulas in making declarations. Since then, in implementing the statute, FEMA has considered arithmetic factors as well as measures of economic impact.

The domain of national security and national defense overlapped the policy domain of disaster management. Because disaster management is so centrally linked to the institution of the presidency, and because preparations for the destructiveness of a possible nuclear attack in some ways corresponds with preparedness for catastrophic natural or nonwar disasters, it was not unreasonable to expect presidents of the 1950 to 1980 era to make one purpose also serve the other. Although dual-use policy had to await "official" approval in law in the 1970s, Presidents Truman, Eisenhower, Kennedy, and Johnson all found ways to make their civil defense programs, which were interlocked with state and local emergency management, provide some form of double duty as disaster management activities.[39]

History's Lessons: The CNN Effect

President Reagan and future presidents had to learn to cope with a new stressor in emergency management: improved television news coverage of disasters and emergencies. In the early 1980s, Ted Turner's CNN showed that television news had achieved the ability to cover disasters and emergencies quickly, owing to major technological advances in electronics, satellite communications advances, miniaturization of cameras, and other equipment. News commentators could do voice-overs of live video from the field and could ask questions like, "What is the president doing about this?" Camcorder politics came to be a televisionstaple. Television news now covered cities, states, or any region of the nation. Broadcasts could go global and take live feed of reportage and video virtually anywhere in the world. Fueled by media coverage, the major and minor disasters of the era were often quickly politicized—or at the very least political officials were expected to be more immediately visible and responsive to them.

In 1981, CNN, owing to its around-the-clock news broadcasting, was the first to break the story that a would-be assassin had shot President Ronald Reagan. In 1986, millions were watching CNN when the space shuttle *Challenger* exploded shortly after liftoff. CNN had been the only network carrying the launch live. "By then, some were calling the channel the 'Crisis News Network,' and it consistently pulled in large audiences when major stories broke."[41] CNN coverage of the *Challenger* disaster drew President Reagan into weeks of official pronouncements; he impaneled the Rogers Commission to investigate the incident and was filmed by CNN in several commemorations. Reagan, and each later president, learned to cope with, and sometimes use to their political advantage, CNN coverage. Owing to CNN and other twenty-four-hour TV news channels (i.e., Fox News Channel, MsnBC, ABC News 24, Bloomberg Television, and many more), disasters and emergencies came almost immediately to the White House just as they did to the homes of millions of other viewers. Other nations launched their own public news channels, many broadcast in English and available in the United States (i.e., Al Jazeera English, BBC News and BBC World News, CBC News Network [Canada], DW-TV [Germany], France 24, NHK World-TV [Japan], RT [Russia], and more). Private news channels outside the United States emerged as well (i.e., Times Now and NDTV Profit [India], Sky News [United Kingdom, Australia, New Zealand], Sky TG24 [Italy], Global News Network [Philippines], Dawn News [Pakistan], etc.).[42]

The jumble of federal disaster agencies that existed from 1950 until 1979 connoted presidential and congressional failure to recognize the need for cohesiveness and sound organization in federal disaster management. Yet the limited range of federal disaster relief available to subnational governments and disaster victims in 1950 was gradually expanded, usually owing to controversial experience with mega-disasters, escalating disaster losses over many areas of the nation, and political pressure to increase federal government involvement in disaster response and recovery.

Civil Defense again, and Changes in the Federal Emergency Management Agency

Disaster policy, regardless of laws and rules in force, has been very much a function of what each presidential administration decided it wanted to do in this domain. For President Ronald Reagan (in office from 1981 to 1989), FEMA was for a brief period an uncomfortable holdover remnant of the Carter administration.[40] Regardless, Reagan recruited FEMA into his strategic and tactical battle with Soviet communism. Moreover, the Reagan administration operated in an era when the 24-hour news cycle was evolving and growing. Disasters and emergencies, big or small, got national television news coverage—often with riveting video images of the calamities and tragedies not only after they occurred, but sometimes as they were transpiring. The 1980s were a time when the so-called CNN-effect seemed to become pervasive for all major television network news organizations (see the "History's Lessons" box).

In the Reagan years, state and local government officials, recognizing the rising importance of emergency management and seeking to find ways to stretch dual-use civil defense to the limit, began to establish their own state and local variations of FEMA. Moreover, nonprofit organizations active in disaster, the nation's fire services, private property insurers, the nation's public safety and police officials, and others began to lobby on behalf of government emergency management interests as stakeholder groups.

From 1981 nearly to the end of his administration, Reagan gave civil defense against nuclear attack priority in its disaster policy. In part, Reagan built up America's defense against nuclear attack by Soviet intercontinental ballistic missiles (ICBMs) through an expensive antiballistic missile program. Reagan refused to take a vow of "no first use of nuclear weapons," thus reserving the right to use limited or medium-scale nuclear weapons (neutron bombs, tactical nuclear weapons, or the like) to confront or rebuff a conventional Soviet military attack or invasion of Western Europe. Through all of this, the Reagan administration tapped FEMA for help, and the FEMA directors in the period were happy to oblige the president. Population sheltering and crisis relocation again became FEMA priorities. A Pentagon official created a public relations gaffe for the Reagan White House when he publicly remarked that Americans should be prepared to dig holes in their backyards and cover them with boards to survive a Soviet nuclear attack.

Civil defense issues were moved to a back burner toward the end of the Reagan administration as U.S.-Soviet relations improved, as Presidents Reagan and George H. W. Bush (1989–1993) built improved relations with the Soviet leader Mikhail Gorbachev, and as Soviet communism collapsed.[43] Nonetheless, the threat of terrorism grew during the 1980s as the United States grappled with successive and sometimes tragic airline hijackings and other terrorism incidents that sometimes killed Americans. The civil war in Lebanon and a deadly suicide bomber attack on the Marine barracks in that nation in October 1983 was a harbinger of future terrorist threats to the United States.[44]

In November 1988, President Reagan signed into law the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, amending the Disaster Relief Act of 1974. The Stafford Act, as it came to be called, added many wholly new provisions, superseded many old ones, and revised others. The effects of the Stafford Act were so profound for emergency managers that this law came to demarcate the beginning of modern-era national disaster management. (The Stafford Act is examined in more detail in Chapter 4.)

In sum, the Stafford Act reauthorizes the president to issue major disaster and emergency declarations, sets broad eligibility criteria, and specifies the type of assistance the president may authorize. *Emergency* refers to the following:

> Any occasion or instance for which, in the determination of the president, federal assistance is needed to supplement state and local efforts and capabilities to save lives and protect property and public health and safety, or to lessen or avert the threat of catastrophe in any part of the United States.[45]

This refinement of the definition of *emergency* clearly affords the president a great deal of latitude in determining what is or is not an emergency. In March 1989 an executive order issued by President George H. W. Bush delegated Stafford Act authority, with some exceptions (principally major disaster and emergency declarations), to the director of FEMA. The Stafford Act, as mentioned, authorizes the president to issue major disaster declarations when an incident overwhelms state and local resources.

Regarding federal-state relations, President Reagan's record of approvals and turndowns of governor requests for declarations of major disasters and emergencies says much about his philosophy of federal-state relations. A tough judge of declaration deservedness, to date Reagan turned down a larger share of gubernatorial requests for major disaster and emergency declarations than almost any other president before or since. The exception was, ironically, President Jimmy Carter. He matched Reagan in the percentage of turndowns of governors' requests for major disaster declarations, but Carter approved a much larger share of emergency declaration requests than did Reagan (see Table 4-1 in Chapter 4). Emergency declaration requests do not require that governors submit damage estimates, as do their requests for major disaster declarations.

President Reagan was fortunate because the nation experienced few mega-disasters and no catastrophic disasters during his eight years in office. Nevertheless, disasters outside the United States, such as the 1984 poison chemical release in Bhopal, India[46], and the 1986 Chernobyl nuclear power plant disaster[47] in the Soviet Ukraine produced major changes in U.S. law and disaster policy.

George H. W. Bush, serving only one term in office, suffered through a series of mega-disasters both at the beginning and at the end of his administration. The northern California Loma Prieta earthquake and Hurricane Hugo (which devastated much of the Carolinas), both transpiring in 1989, plus Hurricane Andrew in 1992, disclosed the FEMA limitations under George H. W. Bush and revealed significant flaws in the nation's system of disaster management.

The Federal Emergency Management Agency as an Instrument of Presidential Power

In the early Reagan years, FEMA was directed to (1) prepare federal response plans and programs for the emergency preparedness of the United States and (2) sponsor and direct plans and programs to coordinate with state efforts. FEMA quickly became an instrument of presidential power. In times of disaster or emergency, or when certain relatively unique calamities arose, presidents, as they had done in the past, sometimes chose to use their emergency powers to address new or unique problems. The president's Disaster Relief Fund, administered by FEMA, provided the president a useful emergency spending account. Presidents could and did use it to fund unexpected problems not otherwise anticipated or not adequately funded in other programs established by Congress.[48] The president, invoking his authority through the issuance of a declaration of major disaster or emergency, may require that FEMA draw money from the fund to pay for some type of incident or event the president judges worthy of assistance. Thus, the president's Disaster Relief Fund is, in effect, a first-layer financial safety net open to the president; his federal disaster agency may pay itself, state and local governments, program-eligible disaster victims, and other federal agencies (under mission assignment, defined next) for costs associated with events the president chooses to declare disasters or emergencies.[49]

Although FEMA possesses authority, funding, and limited assets that enable it to do some disaster management work independently, it must depend on other federal departments and agencies to provide additional work and resources to ensure a complete federal response. If another federal agency besides, or other than, FEMA, is responsible for addressing the event, FEMA makes fund money available to that federal department or agency through "mission assignment" authority (discussed in Chapter 6). In the event of a presidentially declared disaster, a mission assignment may be issued to a federal agency by the FEMA director, associate director, or regional director. A mission assignment is a work order given to a particular agency. It directs an agency to complete a specified task and confers funding, managerial controls, and guidance.

The main reason why FEMA has been and remains deeply beholden to whoever is in the Oval Office is that FEMA has always had a small, politically weak, and occasionally divided clientele and community of advocates. FEMA has a base of support in Congress, but that base is usually only mobilized after disasters in which large sums of federal money need to be dispensed to meet a great many needs—needs often championed by various congressional lawmakers. Congress often exhibits great ambivalence toward the agency; they need it to do what it does, but they sometimes need to criticize it when their constituents complain about slow or inadequate disaster relief. If FEMA officials are highly responsive to presidential wishes and if they succeed in maintaining a positive image in the minds of most of the public, FEMA leaders judge themselves favorably.

Through the Carter, Reagan, George H. W. Bush, and Clinton eras, FEMA was an independent federal agency with few regulatory powers.[50] The organization came to be exceptionally good at mobilizing contractors and temporary volunteer workers to meet most of the nation's fluctuating disaster management needs. The FEMA full-time workforce from 1979 to 2003 rarely exceeded 3,000, as the agency relied on paid reservists and unpaid volunteers, various paid disaster-knowledgeable private contractors, and certain non-profit organizations when circumstances dictated.[51] The independent agency's emergency response and recovery capabilities were dramatically enhanced by its ability to mobilize and work cooperatively with the people and resources of other federal agencies, including working under various emergency response plans in effect between 1981 and 2003. By federal fiscal years 2011 and 2012, FEMA told Congress it had a total full-time federal workforce of 5,645 and 5,101 respectively.[52]

Once FEMA became part of the DHS, it experienced major fluctuation in the size of its full-time workforce. In 2010 its full-time employee total, including paid volunteers, was 7,838 and by 2011 it rose to 10,054.[53] These personnel totals included Disaster Assistance Employees (DAEs) and Cadre of On Call Response/Recovery Employees, shortened to CORE by FEMA (specialists for specific types of disasters retained for the full budget year, neither of which can be considered full-time federal civil servants). Conversely, FEMA has dramatically

augmented its temporary workforce capacity by drawing from full-time employees of other agencies and offices of DHS when needed.

It became more difficult for the agency to maintain a high profile in the White House of both Presidents George W. Bush and Barack Obama, owing to the fact that as of 2013 it was ensconced in a department of some 220,000 full-time federal workers led by a secretary holding permanent cabinet rank. Over its first three years in DHS, FEMA was headed by disaster-inexperienced political appointees holding the title of undersecretary. Though still only about 3 to 5 percent of the total full-time federal employee workforce of DHS, FEMA won a reprieve after Hurricane Katrina in 2005, and thanks to a benevolent Congress, it was reconstituted by the PKEMRA of 2006. Its leader's title was converted from undersecretary to administrator, and more importantly, the FEMA administrator was by law ensured direct access to the president during very major disasters and emergencies.

Stakeholders in Disaster Policy

There are many sets of stakeholders in U.S. disaster policy and emergency management. Stakeholders are persons, individually or in a group, who have, or think they have, something to gain or lose in a policy domain. In emergency management, they are people and organized interests of people affected by the decisions of policymakers and emergency managers. Some stakeholders unselfishly seek benefits or protections for the people or groups whose interests they champion.

The nation's pool of emergency managers, public safety directors, and firefighters, working mostly at the state or local level, usually supports FEMA strongly.[54] Less committed but still likely to promote federal emergency management are many of the nation's governors, mayors, and county executives. In addition, the people of nonprofit organizations active in disasters, who often work shoulder to shoulder with FEMA personnel and whose organizations often qualify for FEMA funding in declared disasters or emergencies, can usually be counted on to back the agency as a stakeholder and clientele group.

Additionally, property insurance officials, almost uniformly enthusiastic about federal efforts in disaster loss reduction but always suspicious that the federal government might nationalize certain lines of insurance, have often found it advantageous to promote certain aspects of government emergency management.[55] In addition, major construction firms, the building trades, and economic development interests have all benefited from post-disaster, federally subsidized reconstruction. However, these same groups sometimes perceive FEMA as a de facto regulator or inhibitor of development and construction in times between disasters. Although these sources of political support are important and necessary in the maintenance of the FEMA organizational and political life, between 1981 and 2003 the collective political power of these interests was not strong when compared with the political clout of interest groups and clientele groups associated with other federal policy areas and agencies. Consider, for example, the domain of health policy and the program offices of the U.S. Department of Health and Human Services (HHS). Clearly, the interest groups and clientele of health policy and HHS (i.e., the American Medical Association, the American Hospital Association, health maintenance organizations) have vastly greater political influence in Congress than FEMA backers do.[56]

Disasters, as prevalent as they may seem nationally, are by definition intermittent and, at least for any specific locality, infrequent. People who survive disasters and who receive aid from FEMA, or from any government agency at any level, do not necessarily go on to champion emergency management. Disasters unquestionably affect the perceptions of voters, regardless of whether or not they directly experienced a disaster themselves.[57] However, disasters rarely affect how people cast their votes in elections, and even more rarely do disasters influence election outcomes. According to the political scientists Kevin Arceneaux and Robert M. Stein, "whether citizens blame the government depends on their level of political knowledge" and how severely the disaster affected their lives. "Although many individuals attribute blame to the government, it does not affect their voting decision for mayor unless they blame the city in particular."[58] Still, there have been some notable exceptions in a few states and cities, as when elected or appointed government officials bungle management of a disaster and so experience the political consequences.

From State and Local to Federal Emergency Management

When examining the evolution of emergency management from 1981 through 1992 one is inevitably led to ask, why does it seem that disaster management is moving away from being a function that is state and locally centered to one that is federally centered? How was it that the president and Congress expanded the federal role in disaster management and how was it that governors, as well as state and local authorities, were willing to submit to this enhanced federal role? In many ways the trend toward "nationalizing disaster" management and toward creating a National Response Plan (NRP) in which federal, state, and local authorities worked in unison, or at least in more coordinated ways, was something well under way before the 9/11 attacks and before the era of homeland security.

President Reagan, a former two-term California governor, espoused a New Federalism policy that may have discouraged governors from requesting presidential declarations as frequently as they had in the 1970s. Reagan's political ideology held that states too often relied on the federal government for help in matters they could easily address on their own. Reagan's philosophy also maintained that the federal government needed to be less intrusive in matters traditionally left to state and local government. A catchword of the Reagan era was "devolution" of certain federal responsibilities back to the states and localities.

However, from 1989 through 1992, when President George H. W. Bush held office, the number of disasters increased and the scale of disaster devastation began to mount. Thus, many more presidential disaster declarations were issued than in the Reagan years. Natural and human-caused disasters, many routine and several catastrophically large, challenged the government's system of disaster management. Governors grew accustomed to regularly requesting declarations for major and minor disasters and emergencies. In addition, Bush and the federal policymakers themselves seemed more receptive to greater federal involvement in emergency management, a realm long understood to be a local and state responsibility.

In April 1992 the Federal Response Plan (FRP) was issued. This plan established a process and structure that promised more systematic, coordinated, and effective delivery of federal assistance to address the consequences of any major disaster or emergency. The FRP also directly stated that sometimes a major disaster or emergency may affect the national security of the United States.[59] Owing to the 9/11 attacks, to formation of DHS, and to President George W. Bush's issuance of Homeland Security Presidential Directive-5 (HSPD-5) in early 2003, an NRP was developed. It was to "align federal coordination structures, capabilities, and resources in a unified, all-discipline, and all hazards approach to domestic incident management."[60]

From Civil Defense to Homeland Security

As mentioned previously, civil defense against nuclear attack was a significant part of the Reagan administration's Cold War foreign policy. Reagan had initially campaigned on a promise to do away with Carter's FEMA. Once elected, however, he called on the agency to ramp up its nuclear attack CRPs and preparedness. FEMA was directed to undertake ambitious civil defense work to parallel Soviet civil defense activity. The Reagan administration also persuaded Congress to increase defense spending, particularly for new generations of nuclear weaponry and for an antiballistic missile defense system.

The Reagan White House issued an executive order titled "Assignment of Emergency Preparedness Responsibilities," which defined a national security emergency as any occurrence that seriously degraded or threatened the national security of the United States. Terrorist incidents were not directly addressed but only listed as Department of Justice responsibilities. The National Security Council (NSC) was assigned responsibility for developing and administering this national security emergency policy. The director of FEMA was to assist in the management of national security emergency-preparedness policy by coordinating with other federal departments. FEMA was also to be responsible for coordinating, supporting, developing, and implementing civil national security emergency preparedness and response programs, continuity of government functions, and civil-military support. This executive order was in effect for five years.[61]

However, by the late 1980s and early 1990s, civil defense against nuclear attack proved less essential as the Cold War came to a relatively rapid end. Consequently, civilian emergency management addressing other hazards in the United States benefited accordingly. Federal, state, and local emergency managers were gradually freed of the restraints imposed by civil defense dual-use requirements—in which civilian use of federal emergency management funding had to have an acceptable civil defense justification—that had previously confounded and frustrated emergency managers at all levels.

Ironically, by the 1990s a counterflow movement was under way. Homeland security governance began to evolve. In 1998 the Hart-Rudman Commission on national security called for creation of a National Homeland Security Agency.[62] Simultaneously, the DOD began to use the term *homeland defense.* Homeland security governance was to rest on emergency management, civil defense, resource mobilization, and counterterrorism.[63] This movement originated years in advance of the 9/11 attacks, though terror attacks at home—the 1993 bombing of the World Trade Center and the Murrah Federal Building bombing in Oklahoma City in 1995—were harbingers of the threat terrorism would pose for the U.S. domestically.

All-Hazards Management

President William Jefferson Clinton's (in office from 1993 to 2001) administration represented a watershed in U.S. disaster policy history.[64] Clinton had twice been governor of Arkansas, and he had had good and bad experiences with FEMA through the years. Clinton was governor when President Carter issued a major disaster declaration to help Florida address the influx of fleeing Cubans during the so-called Mariel boatlift in 1980. Arkansas was selected as a place to host a type of detention facility to house many of these evacuees. FEMA and other federal agencies were to separate average Cubans from the convicted criminals Fidel Castro had funneled in among evacuees. Long processing times and poor living conditions impelled some in the detention camps to riot, thus producing a political controversy for both President Carter and Governor Clinton.

Arkansas, like many states, experienced its own share of floods, tornadoes, severe storms, and other disasters through the years. Clinton knew what federal help meant to states and their governors. Clinton was also keenly aware of the President George H. W. Bush administration's disaster management problems after Hurricane Andrew, a catastrophic disaster that produced widespread human suffering. Andrew took place a mere two months before the 1992 presidential election, and this gave Clinton the opportunity to use FEMA mismanagement and slow response under Bush as a strategic weapon in his campaign.

Between 1993 and 2001, several mega-disasters and a great many smaller disasters transpired, including the great Midwest flood (1993), California's Northridge earthquake (1994), and a series of highly destructive hurricanes. Also, as mentioned, the World Trade Center truck bombing of 1993 and the Murrah Federal Building bombing in Oklahoma City in 1995 signaled an escalation in the scale of terrorist attacks inside the United States.

Under the Clinton administration, FEMA enjoyed its "golden years," although agency staff probably did not realize it at the time.[65] Under President Clinton, FEMA was directed by an experienced emergency manager, James Lee Witt. FEMA continued as an independent agency much beholden to presidential support. President Clinton and Director Witt did much to diminish the FEMA civil defense activities. Witt created three functional directorates corresponding to the major phases of emergency management: mitigation; preparedness, training, and exercises; and response and recovery. The shift in emergency preparedness toward an all-hazards approach allowed FEMA to focus on addressing natural disasters without having to fear negative political reactions from advocates of civil defense. The agency's mitigation directorate, for example, focused many of its early programs on such hazards as flooding and earthquakes.

At the same time, however, recognition of the threat of terrorist attacks inside the United States was beginning to emerge. In 1993 Congress included a joint resolution in the National Defense Authorization Act that called for FEMA to develop "a capability for early detection and warning of and response to: potential terrorist use of chemical or biological agents or weapons; and emergencies or natural disasters involving industrial chemicals or the widespread outbreak of disease." As evidenced by this resolution, Congress was becoming increasingly concerned about the threat posed by terrorist organizations and technological disasters. Much of this concern resulted from the World Trade Center bombing earlier that year, committed by a group of Islamic fundamentalist terrorists (later determined to have been led by Osama bin Laden), in which 6 people were killed and 1,042 were wounded. The blast left a five-story-deep crater inside the complex and caused $500 million in damages.[66] The attack had been an obvious attempt to collapse one or both of the Twin Towers of the World Trade Center.

By early 1993 President Clinton and Congress helped divest FEMA of many of its responsibilities in planning and preparing for nuclear attack by Russia, which had shed communism in the early 1990s. In November 1994, the National Defense Authorization Act for fiscal year 1995 stipulated that the policy of the federal government was for FEMA to provide necessary direction, coordination, guidance, and assistance so that a comprehensive emergency preparedness system would emerge for *all* hazards in the United States.[67]

In January 1994 the FEMA National Security Steering Group, chaired by FEMA national security coordinator, was established to serve as the focal point for intra-agency and interagency coordination of national security–

related activities. It was to ensure that national security matters were integrated into FEMA overall "all-hazards" approach to emergency management. Nonetheless, there was "pushback" by FEMA Director James Lee Witt. According to Morton, "James Lee Witt did not want his agency to be in the counter-terrorism business, a preparedness tasking that would compete for funds with its mitigation and disaster assistance functions."[68]

In November 1994, under a National Defense Authorization Act, the old Civil Defense Act of 1950 was repealed and all remnants of civil defense authority were transferred to Title VI of the Stafford Act. The all-hazards approach to preparedness, much favored by state and local emergency managers, had finally broken free of the confines of "civil defense against nuclear attack" dual-use restrictions. FEMA now had the statutory responsibility for coordinating a comprehensive emergency preparedness system to deal with all types of disasters. Title VI also ended all Armed Services Committee oversight over FEMA and significantly reduced the priority of national security programs within FEMA. Money authorized by the Civil Defense Act was reallocated to natural disaster and all-hazards programs, and more than 100 FEMA defense and security staff members were reassigned.[69]

Support for traditional civil defense declined, but in the 1990s terrorism was increasing. FEMA had just undergone a complete reorganization early in the Clinton administration, and so FEMA leadership had no appetite for additional responsibilities and obligations in matters of terrorism.[70]

The Rise of Terrorism

During the Clinton administration, terrorism gradually emerged as a new and major concern of federal emergency management. The United States has a long history of dealing with terrorists and terrorism, but the first presidential disaster declaration for a terrorist-caused incident occurred only after the 1993 truck bomb attack on the World Trade Center in New York City.

This attack was followed in 1995 by a much deadlier truck bomb attack, committed by domestic terrorist Timothy McVeigh and his coconspirators, on the Murrah Federal Building in Oklahoma City, killing more than 167 people, 19 of whom were children, and injuring 782 others.[71] The Oklahoma City bombing was the first disaster in which FEMA officials had to work closely with FBI officials. The attack, although committed by Americans, drew FEMA further into the business of managing the consequences of terrorism.

The Oklahoma City bombing impelled the president and other policymakers to seek clarification of the FEMA role in terrorism consequence management.[72] Also, this was one of the very few times that a president had used his authority under the Stafford Act of 1988 to issue an emergency declaration before a governor requested one. Ordinarily, presidents do not issue an emergency or major disaster declaration in the absence of a governor's request unless the disaster or emergency involves a direct federal concern.

A presidential decision directive issued by Clinton in June 1995 stated that it is the policy of the United States to use all appropriate means to deter, defeat, and respond to all terrorist attacks on our territory and resources, both people and facilities, wherever they occur. It assigned main responsibility for crisis management to the Department of Justice and main responsibility for consequence management to FEMA.[73]

So even before September 11, 2001, domestic disaster management began to be eclipsed by the nation's growing concerns about terrorism.[74] Some policymakers and emergency management professionals worried that the devastation from human-made disasters, particularly terrorist-caused disasters, would match or exceed the scale of damage caused by natural disasters.

In 1994 amendments to the Title VI of the Stafford Act of 1988, FEMA was to provide the necessary direction, coordination, guidance, and assistance to create a comprehensive emergency preparedness system based on all-hazards emergency management. FEMA was to devise federal response plans and programs for the emergency preparedness of the United States, in cooperation with state and local emergency preparedness efforts. The FEMA director could request reports on state plans and operations for emergency preparedness as may be necessary to keep the president, Congress, and the states advised of the status of emergency preparedness in the United States. Emergency Management Assistance Compacts (EMACs) were negotiated by agreements of various state governments and approved in federal law by Congress and the president. They were pre-disaster interstate compacts aimed at facilitating cross-border mutual aid among signatory state governments. The compacts also sought consistency with federal emergency response plans and programs. They were fundamentally intended to help states and their respective localities assist adjacent states and localities experiencing disaster in some form. Most compacts called for reciprocal state emergency preparedness legislation advancing mutual aid and assistance between states and in cooperation with the federal government.[75] Such initiatives promised signatory states cross-border help in times of disaster and the agreements helped avoid problems of legal liability, cost reimbursement, and regulatory misunderstandings common whenever responders from one state cross over into another state.

Disaster Mitigation Becomes Law and Policy

Disaster mitigation is defined as sustained action to reduce or eliminate risk to people and property from hazards and their effects. The recovery phase of disaster offers opportunity for mitigation actions. In December 1993, following the great Midwest flood of the previous summer, the Volkmer Amendment contained within the Hazard Mitigation and Relocation Assistance Act of 1993 amended some parts of the 1988 Stafford Act. The Volkmer Amendment increased FEMA funds dedicated to community assistance disaster funding for relocation or hazard mitigation activities from a subsidy of 10 percent (in the original Stafford Act of 1988) to 15 percent.[76] What this means is that once FEMA has paid out a sum total of federal disaster relief to a state under a presidential declaration of major disaster, the state then is entitled to receive additional federal money equivalent to 15 percent of the total funds the state received from the federal government under the declaration. The state may use this additional federal money to subsidize state and FEMA-preapproved disaster mitigation projects. Such projects pay for relocating buildings vulnerable to flooding, improving storm-water systems in various municipalities, bridge retrofitting, seismic reinforcement of public structures, or other purposes.

The Volkmer Amendment also increased from 50 percent to 75 percent the federal share of the cost of specific mitigation activities or projects. This increase greatly benefited states and localities that put forward worthy mitigation projects and that were willing to come up with the remaining costs. The amendment also stipulated federal rules and conditions under which FEMA could "buy out" damaged homes and businesses vulnerable to recurring disaster loss owing to their presence in high-hazard zones; it required the complete removal of such structures in certain circumstances; and it dictated that the purchased land be dedicated "in perpetuity for a use that is compatible with open space, recreational, or wetlands management practices."[77] One reason why so many U.S. cities today have open space, bikeways, river walks, parks, and other recreational amenities adjacent to rivers and streams running through their jurisdictions is because of their disaster mitigation efforts, many of these subsidized by FEMA mitigation funding.

By early 1995 Witt's vision for FEMA was to strive for a cooperative effort among the different levels of government and agencies, through the Partnership for a Safer Future for America. The initiative included a wide assortment of FEMA stakeholders. Witt wanted to ensure that more people were dedicated to protecting their families, homes, workplaces, communities, and livelihoods from the sometimes-devastating effects of disasters. FEMA wanted builders and developers to construct hazard-resistant structures located out of harm's way. The agency's leaders hoped that governments and private organizations would set forth plans, compile necessary resources, and rigorously train and exercise for disaster responses. Another goal was com-munity preparation and planning for recovery and reconstruction before disasters struck.

Central to Witt's vision was an increased emphasis placed on disaster mitigation. FEMA had housed a collection of modest mitigation programs before Witt's regime, but Witt made mitigation the foundation of emergency management and the primary goal of the agency.[78] The reasoning was that mitigation activities and strategies may substantially reduce the impact of disasters and, in some cases, prevent disasters altogether.

Through highlighting mitigation efforts and securing more program resources, FEMA could substantially enhance its capacity and presence in intergovernmental relations on a continuous basis, rather than merely after a disaster. Whether such invigorated FEMA mitigation efforts would elicit adequate state and local responses, however, was uncertain. Local officials sometimes assume that they have little to gain from mitigation efforts, because in the event of a disaster, the federal and state government will pay the major share of their local disaster losses.[79] Moreover, mitigation efforts often have to compete with the far more alluring concerns of economic growth and development on the local level. Because local officials, developers, and citizens often view mitigation efforts as financially costly and restrictive of personal freedom, mitigation efforts were bound to become politically controversial.

In October 1997 the Clinton-Witt FEMA launched Project Impact, an effort that sought to build disaster-resistant communities through public-private partnerships.[80] The endeavor included a national public awareness

campaign, the designation of pilot communities, and an outreach effort to community and business leaders. FEMA encouraged communities to assess the risks they faced, identify their vulnerabilities, and take steps to prevent disasters. The first three pilot communities were Deerfield Beach, Florida; Pascagoula, Mississippi; and Wilmington, North Carolina. Soon after, communities in the states of California, Maryland, Washington, and West Virginia joined Project Impact. The FEMA goal was to have at least one Project Impact community in every state by September 30, 1998. The program resonated well with U.S. lawmakers, and Congress appropriated $30 million for Project Impact for the federal fiscal year 1998 and $25 million for fiscal year 1999. Ten years later, Project Impact communities such as Tulsa, Oklahoma; Seattle, Washington; Miami-Dade County, Florida; and Jefferson County, West Virginia, among others, continued to sustain their disaster mitigation initiatives.[81]

Project Impact was a relatively small-scale but widely popular "distributive" politics program. It was distributive in the sense that benefits were allocated to an interested pool of local government applicants aided by their respective states. The costs of the program were shouldered by the national taxpayer, but the funding amounts were so modest relative to the size of the federal budget that any one taxpayer was spending only a fraction of a cent on the program. The logic behind the project was that the small federal subsidy could leverage ambitious local and community-level mitigation activity while at the same time raising community awareness of disaster vulnerability.

Project Impact paved the way for enactment of the Disaster Mitigation Act of 2000 (DMA 2000), a law that amended the 1988 Stafford Act and gave FEMA authority to establish a program of technical and financial assistance for enhanced pre-disaster mitigation to state and local governments. FEMA was to help state and local governments develop and carry out pre-disaster hazard mitigation measures that were cost effective and designed to reduce injuries, loss of life, and damage to and destruction of property, including damage to critical services and facilities under the jurisdiction of the states or local governments.

DMA 2000 also upgraded the 1974 requirement for post-disaster mitigation plans by requiring that states prepare a comprehensive state program for pre-disaster emergency and disaster mitigation before they could receive post-disaster declaration mitigation funds from FEMA. It also required local governments to identify "potential mitigation measures that could be incorporated into the repair of damaged facilities" before being eligible for pre- and post-disaster funding. The aim of this policy was to encourage local governments to engage in such mitigation activities as "hazard mapping, planning, and development of hazard-sensitive building codes."[82] The pre-disaster mitigation efforts that grew out of Project Impact built community partnerships and sought to increase community support for actions proposed. By 2001, more than 200 local governments were participating in Project Impact.[83]

Nevertheless, the success of the DMA 2000 and Project Impact has been modest at best. It is difficult for the federal government to compel county and municipal governments to take mitigation steps.[84] Disaster mitigation work at the local level is often difficult and controversial. Community opposition to mitigation may result from the costs mitigation imposes on residential and commercial property owners, from countervailing local development pressures, from a lack of political will or funding needed to retrofit existing government-owned facilities, and from controversy surrounding private property rights and government "takings" issues.

Terrorism Remakes Disaster Management

On September 11, 2001, foreign terrorists hijacked four commercial jetliners and used them in suicide attacks. The first aircraft struck the upper floors of the North Tower of the World Trade Center. Within a period of minutes a second impaled the South Tower of the Trade Center. In the skies above the Mid-Atlantic area, terrorists piloting two more hijacked airlines prepared for their attacks. One of those planes was flown into the side of the Pentagon, penetrating through two outer rings. A fourth plane, United Airlines Flight 93, may have also struck a critical Washington target had it not been for the heroic efforts of passengers who fought to regain control of the plane. Hijackers of Flight 93, realizing they would be overwhelmed by a group of passengers, deliberately brought the plane down. Flight 93 crashed outside of Shanksville, Pennsylvania, killing all on board.

President George W. Bush (in office from 2001 to 2009) issued an emergency declaration to New York immediately upon Gov. George Pataki's request, and six hours later the president issued a major disaster declaration to the state for New York City (approximately six hours after the initial attack at 8:43 a.m. Eastern Daylight Time).[85] Soon after, Virginia and New Jersey were issued major disaster declarations as well. On September 14, 2001, President Bush signed a declaration of national emergency, anticipating other possible terrorist attacks. By September 15, 2001, Congress had approved a $40 billion emergency supplemental appropriation to pay for disaster relief and further antiterrorism and counterterrorism actions.

Months later, several congressional leaders advocated creating a homeland security department. President Bush at first resisted the idea on grounds that another new, large federal bureaucracy was not the way to prevent or prepare for future possible attacks. However, he relented in the face of growing political pressure to establish the new department. Moreover, the Bush administration's White House level Homeland Security Council, led by former Pennsylvania governor Tom Ridge, proved to be an awkward and relatively powerless entity. The Homeland Security Act of 2002 was passed by Congress late in that year and signed in to law by President George W. Bush. On January 24, 2003, the DHS began operation in accord with the new law.

The creation of the DHS was one of the largest federal reorganizations since President Truman created the DOD in 1947. As DHS was being formed it incorporated all or part of twenty-two federal agencies, forty different federal entities, and approximately 180,000 employees.[86]

The reorganization merged together agencies (or parts of agencies) with very diverse organizational structures, missions, and cultures, and, importantly, diverse ideas about the management of domestic threats and emergencies. In the emergency management arena, the overall effect of the reorganization has been to expand the role of defense and law enforcement–oriented agencies concerned exclusively with terrorism while diminishing the role and decreasing the prestige of organizations conducting all-hazards emergency management (see Figure 3-1).[87]

Homeland Security Presidential Directive

Major events in U.S. history have often triggered major changes in the governmental process.[88] A great political impetus to act on terrorism was provided by the investigations and reports of the National Commission on Terrorist Attacks Upon the United States, commonly referred to as the 9/11 Commission.[89] From this, the George W. Bush administration was pressed to prepare a comprehensive NRP.

On February 28, 2003, President George W. Bush issued HSPD-5.[20] Its purpose was "[t]o enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system." The secretary of DHS was given responsibility for implementing HSPD-5 by developing the NRP and a National Incident Management System (NIMS).[91] To this end, HSPD-5 mandated the development of a "concept of operations" for disasters that would incorporate all levels of government as well as crisis and consequence management functions within one unifying management framework to manage domestic incidents. Under the HSPD-5 directive, all federal agencies were required to adopt NIMS and to make its adoption a requirement for other governmental entities receiving federal assistance. Specifically, sections 3 and 4 revealed how the marriage of conventional disaster management and terrorism consequence management would work. Section 3 sets out the objectives of the department:

> To prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies, the United States Government shall establish a single, comprehensive approach to domestic incident management. The objective of the United States Government is to ensure that all levels of government across the Nation have the capability to work efficiently and effectively together, using a national approach to domestic incident management. In these efforts, with regard to domestic incidents, the United States Government treats crisis management and consequence management as a single, integrated function, rather than as two separate functions.

Figure 3-1 U.S. Department of Homeland Security Organizational Chart
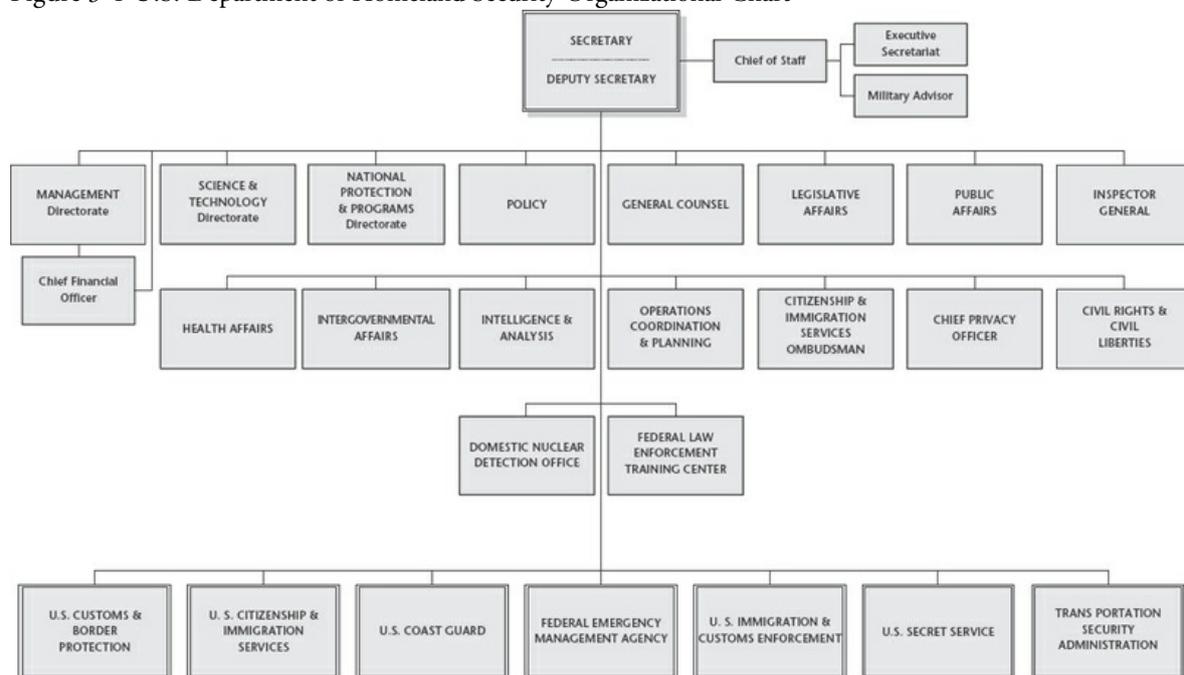
Source: U.S. Department of Homeland Security. "Organizational Chart." April 10, 2013. www.dhs.gov/xlibrary/assets/dhs-orgchart.pdf (accessed May 16, 2014).

Section 4 summarizes the general responsibilities of the secretary:

> The Secretary of Homeland Security is the principal Federal official for domestic incident management. Pursuant to the Homeland Security Act of 2002, the Secretary is responsible for coordinating Federal operations within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies. The Secretary shall coordinate the Federal Government's resources utilized in response to or recovery from terrorist attacks, major disasters, or other emergencies if and when any one of the following four conditions applies: (1) a Federal department or agency acting under its own authority has requested the assistance of the Secretary; (2) the resources of State and local authorities are overwhelmed and Federal assistance has been requested by the appropriate State and local authorities; (3) more than one Federal department or agency has become substantially involved in responding to the incident; or (4) the Secretary has been directed to assume responsibility for managing the domestic incident by the President.

Additionally, section 15 calls for a NIMS that is to include a core set of concepts, principles, terminology, and technologies covering the Incident Command System (ICS), multiagency coordination systems (MACs); unified command; training; qualifications; certification; and incident information collection, tracking, and reporting.

However, in calling for the development of a new NRP, HSPD-5 seemingly ignored the fact that the United States already had a plan for coordinating the federal response to major disasters. The existing FRP, which had been developed in the late 1980s and used in the early 1990s, had proved effective for coordinating "federal" resources in many major disasters and emergencies. It had even worked well in managing the effects of the 9/11 attacks. Although the NRP did not supplant that framework, it did make several important modifications. Under the NRP, the primary responsibility for managing domestic crises was now to rest with the secretary of homeland security. The plan also contained language strongly suggesting that the federal government would in the future assume more responsibility for directly managing some crises. State and local governments were included, though some alleged that subnational officials were poorly consulted in the design of the new plan. This significantly disregarded the "bottom-up" emergency management and "shared governance" policies that had existed before.[92] In effect, state and local governments were no longer completely free to independently devise their own emergency management systems. They now had to work in conformity with the national template largely fashioned by federal officials endeavoring to obey new federal law and presidential orders.

Owing to state and local emergency management resistance, federal lawmaker assent, and a dismal NRP experience during and after the Hurricane Katrina catastrophe, the plan was revised, updated, and reissued as the National Response Framework (NRF) in early 2008. The NRF is constantly subject to revision. In the 2008 round, state and local emergency management partners were both included and consulted in framework's development process. The NRF established a comprehensive all-hazards approach intended to strengthen and improve the ability of the United States to manage domestic incidents in cooperation with state, local, tribal, and territorial governments. In the NRP incidents of national significance encompassed major disasters or emergencies declared by the president and/or the secretary of DHS. However, under the NRF the term *incidents of national significance* was eliminated.[93] Nonetheless, the secretary of the DHS could continue to "use limited pre-declaration authorities to move initial response resources closer to a potentially affected area," and presidential authority to issue a variety of other types of disaster or emergency declarations, whether of national significance or not, was unaffected.[94] Simply put, the troublesome and often confusing incident of national significance designation appeared to both duplicate existing presidential authority as well as seemingly invest the DHS secretary with a special form of discretionary power that was largely symbolic.

On December 17, 2003, President Bush issued HSPD-8.[95] This directive gave the secretary of DHS broad authority in establishing national preparedness and implementing programs to improve "prevention, response, and recovery" operations. Although the directive explicitly calls for actions that address all hazards within a risk-based framework, its major focus is on preparedness for terrorism-related events. Similarly, although HSPD-8 was intended to address issues related to preparedness, a broad term that is generally conceptualized as an integrative

and comprehensive process, the directive is mainly concerned with training and equipping emergency response agencies[96] (see the "How Things Work" box).

President Barack Obama's era of disaster policy and management are reviewed in Chapter 4 and in other sections ahead, including the summary below.

Summary

This chapter surveyed almost sixty years of disaster policy history. It revealed that presidents often make creative use of their disaster declaration authority. Presidents from Truman to Carter, generally within limits set by Congress, tethered civil defense to a nascent and evolving state and local emergency management of nonwar disasters and emergencies. Still, the theme and thread of civil defense continued for decades, often confounding or complicating conventional emergency management. Disaster policy is not simply emergency management shaped by presidents and other policymakers and carried out by government workers. Disaster policy is a hybrid of conventional emergency management; civil defense; and, since 2001, homeland security. Presidents from Reagan through Obama have found a place for FEMA not only in disaster management but in civil defense and homeland security.

This chapter summarized the history of presidential domination of disaster policy formulation and implementation since 1950. Congress has afforded the president considerable and unfettered discretion to define for the nation what is or is not a disaster or an emergency. This chapter demonstrated that emergencies and disasters are in some ways "political" constructs. The president is even entrusted with a fund he can use to pay for various disaster-related costs for the declarations he issues. Congress periodically must replenish these funds with new spending authority under emergency supplemental appropriations, something increasingly controversial in the federal budgetary environment since 2008.

Presidents from Truman to Carter conducted disaster policy implementation through an assemblage of federal organizations. Some of these organizations resided in the White House, some operated as major and minor arms of federal departments, and some labored in obscurity as back offices of independent agencies. It was not until nearly the end of the Carter administration in 1979 that disaster policy was granted a formal organizational and functionally integrated home in the form of a small independent federal emergency management agency. FEMA officials always understood that they survived and succeeded in part as a function of how close they were to the presidency. The agency lacked a strong pool of stakeholders that could assiduously lobby for it on Capitol Hill. It was too small to go toe-to-toe with the much larger departments like defense, HUD, justice, or transportation. Whatever clout FEMA possessed had to be back-stopped by the White House and collegially supported by other federal agencies serving various emergency support function (ESF) arrangements in times of disaster.

How Things Work: Whither the Federal Emergency Management Agency?

FEMA was formerly an independent agency within the executive branch of government. Owing to an initiative of President Clinton, the FEMA director was accorded ex officio cabinet status for almost the whole of the Clinton administration. In 2003 FEMA was incorporated into DHS as lead agency for emergency preparedness and response. FEMA, which is the only agency within DHS that is charged specifically with reducing the losses associated with nonterrorism-related disasters, lost significant visibility and financial and human resources in the reorganization. As a small agency within a massive bureaucracy, its activities became over-shadowed by much larger and better-funded entities within DHS.

The decline in FEMA prestige and influence in the wake of 9/11 caused great concern among U.S. emergency management experts. Public policy now demands putting more resources into law enforcement and counterterrorism activities, and preparedness for other disasters, natural or technological, are viewed as less important. In addition, the disaster sociologist Kathleen J. Tierney puts it this way:

> As agencies based on command-and-control principles assume greater importance in local preparedness efforts, the influence of organizations that focus on hazards other than terrorism and that operate in a broadly inclusive fashion and on the basis of coordination, rather than control, has waned.[97]

Testifying before Congress in March 2004, former FEMA director James Lee Witt warned that the nation's ability to respond to disasters of all types has been weakened by some post– 9/11 agency realignments. In written testimony regarding the loss of cabinet status for the FEMA undersecretary and the position of FEMA within DHS at the time, Witt stated, "I assure you that we could not have been as responsive and effective during disasters as we were during my tenure as FEMA director had there been layers of federal bureaucracy between myself and the White House."[98]

In January 2009, President Barack Obama was inaugurated. Interestingly, his inauguration ceremony was declared a national special security event by the U.S. Secret Service months before, and President George W. Bush had issued an emergency disaster declaration for the District of Columbia well in advance of the day. Both measures helped fund and organize security, law enforcement, and emergency management for the event. The new president nominated Craig Fugate, a highly experienced emergency manager and firefighter from Florida, as FEMA administrator.

President Obama confronted a series of national economic emergencies as massive banks and investment houses continued to fail and as the national housing market cratered. In some respects, Obama's great reluctance to turn down disputable governor requests for declarations of major disaster and emergency during his first term may have been a subtle effort to use federal post-disaster relief as a kind of economic stimulus for states and localities double hit by economic hard times and a calamity of some sort. In 2011, he set a record for issuing the largest number of presidential disaster declarations of any previous president. Obama was neither motivated to remove FEMA from DHS, nor was he interested in diminishing homeland security powers. He did, and continues to, support federal disaster mitigation aimed at the states and their localities. He has been proactive in preparing for and responding to disasters that befall the nation. Moreover, he is one of the first presidents to recognize the disaster-causing potential of climate change effects. In 2012, as he sought re-election, several competitors in the opposing political party, including the ultimate Republican presidential nominee, former Massachusetts governor Mitt Romney, alleged that the president had misused his disaster declaration authority and had been economically wasteful and political in doing so.[99] Some criticized FEMA and sought its termination.

Ironically, by late November 2012, President Obama appeared to have been vindicated on all counts. He won re-election and a second term. Soon after he and his emergency management workforce had to respond to Superstorm Sandy, which ravaged nearly the whole of the New Jersey coastline and extensive inland areas, produced a massive swath of damage across Long Island, New York, with barrier island areas hardest hit, flooded significant portions of lower Manhattan including two major under-river auto tunnels, and not to be forgotten hit low-lying, populated areas of Staten Island, New York, causing fatalities. The president issued disaster declarations to Sandy-impacted states and visited damage zones, often with his FEMA administrator at his side. The Obama White House judged recovery from Sandy as largely a housing challenge, and to the chagrin of the emergency management community, Obama appointed the secretary of HUD to lead the federal recovery effort in cooperation with state and local authorities.[100]

Certain catastrophic or unique disasters helped spawn specific disaster-related laws. But presidents, in cooperation with Congress, have fashioned and steered federal disaster policy. The theme of federal-state and intergovernmental relations is evident throughout the chapter and will emerge again with more detailed analysis in Chapter 6. Similarly, matters of civil defense and homeland security were chronicled in conjunction with maturing conventional all-hazards disaster management. Subsequent chapters delve more deeply into matters of presidential disaster declarations, the role of science and engineering in the field, how intergovernmental relations work in emergency management, how civil-military relations influence disaster policy, and how disaster policy has global relevance. This chapter was an attempt to paint an accurate, although not comprehensive, picture of U.S. disaster policy history inside a modestly small frame.

Key Terms

Chapter 4 Understanding Disaster Policy through Presidential Disaster Declarations

In this October 31, 2012, Photo, President Barack Obama is Greeted by New Jersey Gov. Chris Christie upon Arrival at Atlantic City (N.J.) International Airport during a Presidential Visit to Areas Damaged by Superstorm Sandy. Obama, with Christie at his Side, went on to Visit Hard-Hit Coastal Sections in an Effort to Convey a Message of Effective Government, Bipartisanship, Restoration, and Redevelopment, All this only Days before the 2012 Presidential Election.

(Source: AP Photo/ Pablo Martinez Monsivais, File.)

UNDER THE U.S. CONSTITUTION, THE PRESIDENT HOLDS SPECIAL POWERS in times of catastrophic disaster. Since 1950, presidents have possessed the authority to define[1] and officially declare disasters and emergencies ranging from catastrophes to more routine and much less devastating events.

Each president's declaration decisions reveal something about that president as a person, as a public servant, and as a political leader. The record of disaster declarations also says something about each president's view of federal-state-local relations, his position with regard to disaster policy and emergency management, his use of declarations as an instrument of political power, and his view of disasters within the broader context of the era in which he has governed.[2] And more recently, the threat of terrorism has dramatically increased the range of presidential discretion in declaring events or circumstances as disaster or potential disaster, again ranging from suspected small-

scale threats to catastrophes. This, too, has allowed the president to make policy determinations regarding how events of almost any type will be addressed by homeland security and emergency management agencies and officials.

This chapter looks at how the role of the president has evolved in declaring disasters, what the process is by which governors ask the president for disaster declarations, what may influence the president in declaring emergencies and disasters, and how legislators shape and influence both broad policy and narrow case-by-case decision making in matters of disaster declaration. It concludes with some theories of presidential decision making.

The President's Constitutional Emergency Powers

Presidential emergency powers are the actions that the president may exercise in extraordinary circumstances: rebellion, epidemic, national labor strike, or disaster. The president's oath of office requires that he "preserve, protect, and defend" the Constitution and uphold its provisions. Although no specific emergency powers were included in the Constitution, principal authorization of emergency powers resides in article 2, section 3, which states in part that the president "shall take care that the laws be faithfully executed," and section 2, which grants the president power as commander in chief of the armed forces. In times of crisis, presidents can declare that the Constitution authorizes them to exercise powers usually granted to the legislative or judicial branches of government, thus fusing all governmental power in the executive branch for the duration of the crisis. President Abraham Lincoln justified the actions he took after the outbreak of the Civil War by claiming that the emergency made it necessary for him to exercise legislative powers until he could call Congress back into session. During World War II, President Franklin D. Roosevelt declared that unless Congress repealed a certain provision in a war-related economic measure, he would treat the law as if it had been repealed for the duration of the emergency, in effect threatening Congress with the loss of its legislative powers.[3]

Actual disasters and emergencies through history have helped to develop, refine, and expand the range of presidential emergency powers beyond what is alluded to in the Constitution.[4] Congress and the president have enacted a series of disaster relief laws, and a great many of these have essentially expanded the president's role in matters of disaster policy over time.

Federal Disaster Relief Law and Declaration Authority

Congress passed the first permanent statutes authorizing federal disaster assistance in 1947 and 1950. The 1947 legislation provided surplus property and personnel as needed, and its 1950 counterpart gave the president authority to determine what type of aid was required. These measures changed the nature of disaster relief in the United States. Only later did congressional leaders begin to see the 1950 act as precedent setting and as an early, general, national-level disaster policy model.

The Federal Disaster Relief Act of 1950 clearly stated for the first time that federal resources could and should be used to supplement the efforts of others in the event of a disaster. The new law made federal disaster assistance more accessible, since it no longer required specific congressional legislation to address each new disaster but instead simply allowed the president to decide when federal disaster assistance was justified and necessary. The Disaster Relief Act of 1950 provided "an orderly and continuing means of assistance by the federal government to states and local governments in carrying out their responsibilities to alleviate suffering and damage resulting from major disasters."[5] Congress built on the 1950 act by passing a number of laws in the 1970s that expanded the scope of federal government responsibility in disasters. For example, the Disaster Relief Act of 1974 created a program that provided direct assistance to individuals and families following a disaster. Importantly, the act gave the president the power to declare an emergency as well, whereas previously only a major disaster could be declared.

> Major disaster means any natural catastrophe (including any hurricane, tornado, storm, highwater, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm or drought), or regardless of cause, any fire, flood, or explosion in any part of the United States that in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Stafford Act to supplement the efforts and available resources of the States, Local Governments," (Native American Tribal Governments), and disaster relief organizations in alleviating the damage, loss, hardship, or suffering thereby.[6]

Under the 1974 federal law an emergency was defined as follows:

> Any occasion or instance for which, in the determination of the president, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of catastrophe in any part of the United States.[7]

An emergency is often of less magnitude and scope than a major disaster. However, the president may issue an emergency declaration to address an ongoing event that may later be declared a major disaster.

Congress passed the Robert T. Stafford Disaster Relief and Emergency Assistance Act in 1988. This law enhanced presidential declaration authority in the sense that it imposed fewer restrictions on the types of disasters for which the president could issue a declaration. The measure opened the possibility that a president could issue a disaster declaration for a disaster caused by terrorism or by some unforeseen human or technological calamity.

Along with the authority to issue a major disaster declaration, the president has the authority to direct that the following types of federal disaster assistance be provided:

- general federal assistance for technical and advisory aid and support to state and local governments to facilitate the distribution of consumable supplies
- essential assistance from federal agencies to distribute aid to victims through state and local governments and voluntary organizations, perform lifesaving and property-saving assistance, clear debris, and use resources of the U.S. Department of Defense (DOD) before a major disaster or emergency declaration is issued

- hazard mitigation grants to reduce risks and damages that might occur in future disasters
- federal facilities repair and reconstruction
- repair, restoration, and replacement of damaged facilities owned by state and local governments, as well as private nonprofit facilities that provide essential services or commodities

In congressional language, the Stafford Act seeks to provide an orderly and continuing means of assistance by the federal government to state and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from such disasters by doing the following:

- revising and broadening the scope of existing disaster relief programs
- encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the states and by local governments
- achieving greater coordination and responsiveness of disaster preparedness and relief programs
- encouraging individuals, states, and local governments to protect themselves by obtaining insurance coverage to supplement or replace governmental assistance
- encouraging hazard mitigation measures to reduce losses from disasters, including development of land-use and construction regulations
- providing federal assistance programs for both public and private losses sustained in disasters.[8]

The Stafford Act also provides federal assistance but under either fixed dollar limits or a percentage of eligible costs. In addition, the measure allows presidents to add new categories of emergency as deemed necessary.

Both the 1950 law and the Stafford Act of 1988 stipulate that the governor of an affected state must formally ask the president to declare a major disaster or emergency. If the request is granted, the federal government will then provide disaster assistance "to supplement the efforts and available resources of state and local governments in alleviating the disaster."[9] The governor must provide certain information on the severity and magnitude of the disaster and on the amount of state and local resources to be committed to the disaster or emergency. The president is given wide discretion to determine whether the disaster or emergency is of sufficient severity and size to warrant federal disaster or emergency assistance. The authority to declare a disaster carries with it the power to determine the types of federal disaster assistance that will be made available to state and local governments and to individuals and families. Presidents have always reserved this authority to declare a major disaster or emergency and have never delegated it (see the "How Things Work" box).

How Things Work: The Federal Emergency Management Agency's Disaster Assistance Relief Programs

What help do governments and people expect under the two post-disaster assistance programs from the Federal Emergency Management Agency (FEMA)?

From the Public Assistance Fact Sheet[10]

The Public Assistance Program (FEMA) provides grants to state and local governments and certain nonprofit entities to assist them with the response to and recovery from disasters. Specifically, the program provides assistance for debris removal, emergency protective measures, and permanent restoration of infrastructure.

Eligible Applicants: Eligible applicants includestate governments, local governments, and any other political subdivision of the state; Native American tribes; and Alaska Native Villages. Certain private nonprofit organizations may also receive assistance. Eligible private nonprofits include educational, utility, emergency, medical, temporary or permanent custodial care facilities (including those for the aged and disabled), irrigation, museums, zoos, community centers, libraries, homeless shelters, senior citizen centers, rehabilitation, shelter workshops and health and safety services and other private nonprofit facilities that provide essential services of a governmental nature to the general public. Private nonprofits that provide "critical services" (power, water— including water provided by an irrigation organization or facility, sewer, wastewater treatment, communications and emergency medical care) may apply directly to FEMA for a disaster grant. All other private nonprofits must first apply to the U.S. Small Business Administration (SBA) for a disaster loan. If the private nonprofit is declined for a SBA loan or the loan does not cover all eligible damages, the applicant may reapply for FEMA assistance.

Public Assistance Process: As soon as practicable after the declaration, the state, assisted by FEMA, conducts the Applicants' Briefings for state, local and private nonprofit officials to inform them of the assistance available and how to apply for it. A Request for Public Assistance must be filed with the state within thirty days after the area is designated eligible for assistance. Following the Applicants' Briefing, a Kickoff Meeting is conducted where damages will be discussed, needs assessed, and a plan of action put in place. A combined federal/state/local team proceeds with Project Formulation, which is the process of documenting the eligible facility, the eligible work, and the eligible cost for fixing the damages to every public or private nonprofit facility identified by state or local representatives. The team prepares a Project Worksheet (PW) for each project.

Public Assistance Projects Categories:

- Category A: Debris removal
- Category B: Emergency protective measures
- Category C: Road systems and bridges
- Category D: Water control facilities
- Category E: Public buildings and contents
- Category F: Public utilities
- Category G: Parks, recreational, and other items

Small Projects: Projects falling below a certain threshold are considered "small." The threshold is adjusted annually for inflation. For fiscal year 2012, that threshold is $66,400. For small projects, payment of the federal share of the estimate is made upon approval of the project and notification is required upon completion of the project.

Large Projects: For large projects, payment is made on the basis of actual costs determined after the project is completed; although interim payments may be made as necessary. Once FEMA obligates funds to the state, further management of the assistance, including disbursement to sub-grantees is the responsibility of the state. FEMA will continue to monitor the recovery progress to ensure the timely delivery of eligible assistance and compliance with the law and regulations.

The federal share of assistance is not less than 75 percent of the eligible cost for emergency measures and permanent restoration. The grantee (usually the state) determines how the no-federal share (up to 25 percent) is split with the sub-grantees (eligible applicants).[11]

From the Assistance to Individuals and Households Fact Sheet[12]

The Individuals and Households Program (IHP) provides financial help or direct services to those who have necessary expenses and serious needs if they are unable to meet the needs through other means. Up to the IHP maximum is available in financial help (adjusted each year), although some forms of IHP assistance have limits. Flood insurance may be required as indicated next. These forms of help are available: Housing Assistance (including temporary housing, repair, replacement, and semipermanent or permanent housing construction) and Other Needs Assistance (including personal property and other items).[13]

Housing Assistance

FEMA temporary housing: Money to rent a different place to live or a temporary housing unit (when rental properties are not available)

Repair: Money for homeowners to repair damage from the disaster that is not covered by insurance. The goal is to repair the home to a safe and sanitary living or functioning condition. FEMA may provide up to the IHP maximum for home repair; then the homeowner may apply for a SBA disaster loan for additional repair assistance. FEMA will not pay to return a home to its condition before the disaster. Flood insurance may be required if the home is in a special flood hazard area. Repair and replacement items include the following:

- structural parts of a home (foundation, outside walls, roof)
- windows, doors, floors, walls, ceilings, cabinetry
- septic or sewage system
- well or other water system
- heating, ventilating, and air-conditioning system
- utilities (electrical, plumbing, and gas systems)
- entrance and exit ways from the home, including privately owned access roads
- the blocking, leveling and anchoring of a mobile home and reconnecting or resetting its sewer, water, electrical, and fuel lines and tanks

Replacement: Money to replace a disaster-damaged home, under rare conditions, if this can be done with limited funds. FEMA may provide up to the IHP maximum for home replacement. If the home is located in a special flood hazard area, the homeowner must comply with flood insurance purchase requirements and local flood codes and requirements.

Semipermanent or permanent housing construction: Direct assistance or money for the construction of a home. This type of assistance occurs only in very unusual circumstances, in locations specified by FEMA, where no other type of housing assistance is possible. Construction shall follow current minimal local building codes and standards where they exist, or minimal acceptable construction industry standards in the area. Construction will aim toward average quality, size, and capacity, taking into consideration the needs of the occupant. If the home is located in a special flood hazard area, the homeowner must comply with flood insurance purchase requirements and local flood codes and requirements.[14]

Other Needs Assistance

The Other Needs Assistance (FEMA) provision of the IHP provides grants for uninsured, disaster-related necessary expenses and serious needs. Flood insurance may be required on insurable items (personal property) if they are to be located in a special flood hazard area. Assistance includes the following:

- medical and dental expenses
- funeral and burial costs
- repair, cleaning, or replacement of:
  - ◦ clothing
  - ◦ household items (room furnishings, appliances)
  - ◦ specialized tools or protective clothing and equipment required for your job
  - ◦ necessary educational materials (computers, schoolbooks, supplies)
- cleanup items (wet/dry vacuum, air purifier, dehumidifier) and fuel for primary heat source (heating oil, gas)
- vehicles in need of repair or replacement due to damage by the disaster, or public transportation or other transportation costs
- moving and storage expenses related to the disaster (including storage or the return of property to a pre-disaster home)
- other necessary expenses or serious needs (e.g., towing or setup or connecting essential utilities for a housing unit not provided by FEMA)
- the cost of a National Flood Insurance Program (NFIP) group flood insurance policy to meet the flood insurance requirements[15]

Conditions and Limitations of Individuals and Households Program Assistance

Nondiscrimination: All forms of FEMA disaster housing assistance are available to any affected household that meets the conditions of eligibility. No federal entity or official (or their agent) may discriminate against any individual on the basis of race, color, religion, sex, age, national origin, disability, or economic status.

Residency status in the United States and its territories: To be considered for disaster housing assistance, applicants, or a household member, must provide proof of identity and sign a declaration stating that they are a U.S. citizen, a non-citizen national, or a qualified alien. The Disaster Housing Assistance Program (DHAP) is a joint HUD- and FEMA-administered program.

Supplemental assistance: Disaster housing assistance is not intended to substitute for private recovery efforts but to complement those efforts when needed. FEMA expects minor housing damage or the need for short-term shelter to be addressed by homeowners or tenants. Furthermore, the DHAP is not a loss indemnification program and does not ensure that applicants are returned to their pre-disaster living conditions.

Household composition: People living together in one residence before the disaster are expected to continue to live together after the disaster. Generally, assistance is provided to the pre-disaster household as a unit. If, however, the assistance provided to the household is not shared, or if the new residence is too small or causes undue hardship, members of the household may request assistance separate from their pre-disaster household.

Type of assistance: Generally, more than one type of IHP assistance may be provided to the household. Only FEMA has the authority to determine which type of assistance is most appropriate for the household and the period of assistance to be covered.

Proper use of assistance: All financial assistance provided by FEMA should be used as specified in writing: to rent another place to live, to make the home repairs identified by FEMA, or to replace or repair personal property. Failure to use the money as specified may result in ineligibility for additional assistance. All money provided by FEMA is tax-free.

Documentation: Applicants are responsible for providing all documentation necessary for FEMA to evaluate eligibility. Applicants may need to provide proof of occupancy, ownership, income loss, and/or information concerning their housing prior to the disaster. Applicants should keep all receipts and records for any housing expenses incurred as a result of the disaster. This includes receipts for repair supplies, labor, and rent payments.

Insurance: If applicants have insurance, any assistance provided by FEMA should be considered an advance and must be repaid to FEMA upon receipt of an insurance settlement payment. If the settlement is less than the FEMA estimated cost to make the home habitable, applicants may qualify for funds to supplement their insurance settlement—but only for repairs relating to the home's habitability. FEMA does not provide replacement value amounts or assistance with nonessential items.

Duration of assistance: Repair and replacement assistance is provided as a one-time payment. FEMA temporary housing assistance (or a manufactured housing unit) is provided for an initial period of one, two, or three months. To be considered for additional assistance, applicants must demonstrate that they have spent any previous assistance from FEMA as instructed, and must demonstrate their efforts to reestablish permanent housing. Additional assistance is generally provided for one, two, or three months at a time. The maximum period for IHP assistance is eighteen months.

Appeal rights: Applicants who disagree with the FEMA determination of eligibility or the form of assistance provided have the right to appeal within sixty days of the date of the notification letter.

The FEMA mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

Post–9/11 Disaster Declaration Authority

Over most of the twentieth century, natural and nonterrorism-related human-caused disasters were rarely considered matters of national security, with the notable exception of civil defense plans against nuclear attack. Owing to the 9/11 terror attacks, the administration of President George W. Bush, with the assent of Congress, defined presidential disaster declaration authority as a national security instrument, thus drastically changing federal emergency management. The 9/11 disaster further centralized presidential authority, as did war and several catastrophic disasters before, but most of the governmental changes made in response to 9/11 significantly increased the president's range of authority.[16]

The Bush administration was pressed to prepare such a comprehensive national response plan by the *9/11 Commission Report.*[17]

The Homeland Security Act of 2002, Homeland Security Presidential Directive-5 (HSPD-5), and the Stafford Act of 1988 justify and provide, according to the former National Response Plan (NRP) and the current National Response Framework (NRF), a comprehensive, all-hazards approach to domestic incident management.[18] Disaster declarations in the post–9/11 era are now matters of domestic incident management. All major disasters, emergencies, and catastrophic events declared by the president are considered incidents. Incidents now encompass major disasters or emergencies declared by the president and under the NRF now are defined as "[a]n actual or potential high-impact event that requires coordination of Federal, State, local, tribal, nongovernmental and/or private sector entities in order to save lives and minimize damage."[19]

Catastrophes Enter the Mix, National Special Security Events, and More

The NRF includes a category of incident beyond major disaster and emergency. Catastrophic incidents are defined as the following:

> Any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, and national morale and/or government functions. A catastrophic event could result in sustained national impacts over a prolonged period of time; almost immediately exceeds resources normally available to State, local, tribal, and private sector authorities; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened.[20]

National Special Security Events (NSSEs) are another category of significance; they include "high-profile, large-scale events that present high probability targets" such as various summit meetings of world leaders inside the United States, the Republican and Democratic national political party conventions, inaugurations, and any other event the president believes may be vulnerable to terror attack. An NSSE is one that is of national or international significance as determined by the U.S. Department of Homeland Security (DHS) to be a potential target for terrorism or other criminal activity. These events have included meetings of international organizations. NSSE designation requires federal agencies to provide full cooperation and support to ensure the safety and security of those participating in or otherwise attending the event, and the community within which the event takes place, and is typically limited to specific event sites for a specified time frame. An NSSE puts the U.S. Secret Service in charge of event security; the Federal Bureau of Investigation (FBI) in charge of intelligence, counterterrorism, hostage rescue, and investigation of incidents of terrorism or other major criminal activities associated with the NSSE; and FEMA in charge of recovery management in the aftermath of terrorist or other major criminal incidents, natural disasters or other catastrophic events.[21] The secretary of DHS manages an NSSE grant program that provides reimbursement of eligible costs of organizations engaged in preparing and implementing an NSSE.[22]

Presidential authority under NRF annexes stipulated that the president has formal declaration authority to cover bioterror, cyberterror, food and agricultural terror attacks, nuclear or radiological incidents, and oil and hazardous materials pollution incidents. Nonetheless, not every incident "necessarily results in a disaster or emergency declaration under the Stafford Act."[23]

The Significance of the Changes

Why are these post–9/11 changes important? Presidents now possess almost unencumbered authority to mobilize federal, state, and local resources if they conclude that an event of some kind represents either a terrorism threat or an assumed act of terrorism. When a terrorist event occurs, the NRF draws federal, state, and local agencies together to work under the National Incident Management System (NIMS). In addition, the Homeland Security Act of 2002, related laws, and a series of homeland security presidential directives created changes in FEMA and the domestic and international world of emergency management.

Because the president and DHS-FEMA officials define so many major disasters and emergencies of any type or cause as incidents of national importance, emergency management is today very much interwoven with national security at home and abroad. U.S. emergency managers on every level of government must now learn more about disasters and emergencies, especially those involving terrorism, that occur outside, as well as inside, the United States.[24]

Federal emergency management is predicated on terrorism as a paramount threat, whereas other types of disasters or emergencies occupy diminished positions within the federal emergency management and homeland security community.[25] Until the mid-1980s, when concerns about terrorism arose within the Reagan administration, natural and nonwar human-caused disasters have rarely been considered matters of national security.[26]

Owing to the president's and federal government's problems in the 2005 Hurricane Katrina catastrophe, presidents facing potential mega-disasters may be tempted to federalize the government's response to certain disasters under presidential declarations of "catastrophic disaster." However, the Stafford Act of 1988 and its amendments in subsequent measures remains law, and the process by which the president and FEMA/DHS consider gubernatorial requests for declarations of major disaster and emergency and the nature of what constitutes a disaster agent have been only slightly altered owing to terrorism concerns. Most of these changes reflect a shift toward homeland security, and this has had some ramifications at the state and local levels.

Presidential Discretionary Power

Ever since presidential disaster declaration authority was enshrined in law, the president has been afforded the discretion and flexibility to decide what is and what is not a disaster or emergency. Under the Stafford Act of 1988 and several of its predecessor laws, presidents are free, within limits, to interpret broadly or narrowly what is declarable as a major disaster or emergency.[27] Each president makes declaration decisions on a case-by-case basis.[28]

Before 1950—when Congress considered unique relief legislation for each disaster—awkwardness, delay, pork barreling, and administrative confusion often resulted.[29] By 1950, lawmakers had decided that it made more sense to entrust declaration decision making to the president as an executive responsibility.[30] Ironically, presidential authority to address domestic disasters won political support because many Americans grew concerned that there was no domestic equivalent of the post–World War II Marshall Plan, which sent U.S. aid and funding to countries ravaged by war and famine disaster.[31] Taxpayers complained that they were supporting rebuilding and recovery efforts abroad but not at home.

A presidential declaration of major disaster or emergency has far-reaching consequences because it opens the door to federal assistance and aid by legitimizing the disaster for affected populations.[32] The declaration specifies the state and its eligible counties or county-equivalents, including tribal governments, and thereby delineates by location exactly who is eligible for federal relief. Each declaration is issued to a state or the District of Columbia or an American trust territory or commonwealth. When a declaration identifies counties eligible to receive federal disaster assistance, unincorporated jurisdictions within the county will be eligible for assistance. Incorporated (often chartered) municipalities within a county may receive federal assistance passed through by the state or by the county, depending upon the procedures used in each state. Cities that are coincident with a county or counties (New York City is comprised of five counties) are treated as if they are stand-alone counties.

The Sandy Recovery Improvement Act of 2013 "authorizes the chief executive of a tribal government to directly request disaster or emergency declarations from the President, much as a governor can do for a state."[33] Under the Stafford Act of 1988 "tribes were dependent on a request being made by the governor of the state in which their territory is located."[34] Tribal governments maintained that this requirement undermined their independence and sovereignty. Moreover, some tribal lands overlap state borders. The Sandy Act of 2013 has for the declaration process now made tribal government equivalent to state government. Governors are still free to add disaster or emergency impacted tribal lands (as local governments) in their respective state requests for presidential declarations. The benefit for tribal governments is that in the past it has been difficult for many state emergency management officials to assess disaster damage in tribal areas owing to language and cultural differences as well as to the physical isolation of many tribal lands. The new law includes a section that allows the president to waive the nonfederal contribution (same as state cost share) or to adjust the cost share to a more generous match for tribal governments under the FEMA Public Assistance Program.[35]

Some declarations issued by the president make every county in a state eligible for some form of federal disaster assistance, but usually presidential declarations apply only to the counties that governors have asked them to cover. The president, perhaps advised by federal disaster managers, may choose to include some but not all of the counties recommended by the governor. Moreover, FEMA may add counties to an in-force presidential disaster declaration without the need for presidential preapproval. In such cases the added counties must have met the FEMA county per capita loss qualification threshold.

Presidential declarations of major disaster and emergency are intriguing because authority to make the essential decision rests with the president himself. Most federal laws require implementation decisions by legions of government officials, many of whom operate some distance from the president.[36] Admittedly, once the president issues a declaration, federal agency and program officials, usually in concert with their state and local counterparts, undertake an elaborate and extensive assortment of implementing decisions. Yet the president's decision to push either the "approval button" or the "denial button" is often highly consequential.[37]

Every presidential declaration contains an initial statement about the kinds of program assistance people may be eligible to request. This is extremely important because it determines whether disaster victims will receive direct cash grants, housing supplements, emergency medical care, disaster unemployment assistance, and so forth. It also specifies whether or not state and local governments themselves are eligible to receive federal disaster assistance to replace or repair public facilities and infrastructure. Certain nonprofit organizations may also qualify for federal disaster aid of various types. As mentioned, federal disaster relief may flow to subcounty incorporated municipalities but only those that are located in counties included in the presidential declaration.

A presidential declaration is vitally important to those directly affected by the disaster or emergency. It confers on them an "official" victim status needed to qualify for federal aid. Individuals and households may qualify for various forms of federal disaster assistance under a declaration. Many declarations make aid available through the Public Assistance Program, which provides government-to-government (federal-to-state or local) disaster relief to subsidize much of the cost of repairing, rebuilding, or replacing damaged government or utility infrastructure. Indirectly, a presidential declaration may encourage private charitable contributions from people and businesses far away from the damage zone.

To the public, including those not directly affected by the disaster, the president's declaration is significant for other reasons. At a basic level, a declaration signifies that a major event has occurred, requiring the attention and resources of the federal government. The content of the presidential declaration structures popular perceptions about the nature and scope of the disaster.

As of June 23, 2013, presidents from Dwight Eisenhower (May 1953) to Barack Obama (June 2013) have issued a total of 2,122 major disaster declarations.[38] This is a remarkable total because it represents an average of thirty-five major disaster declarations a year, or a pace of about three (2.947) declarations per month for sixty years.[39] From May 1953 through December 2000, about forty-seven years, there were 1,354 majors issued yielding an annual average of 28 per year. Yet from January 2001 through late June 2013, about a thirteen-and-a-half-year span, some 766 declarations were issued, for that interval raising the average number of major disaster declarations per year to about 59.[40] This means the average annual number of major declarations issued from January 2001 through June 2013 is at least double the annual average of majors issued by presidents from mid-1953 through 2000.

The increasing number and changing variety of presidential disaster declarations reveals in some respects the nation's history of disaster experience and its increasing vulnerability to disaster agents and forces. Variety refers to the types and causes of hazards and incidents granted presidential declarations of major disaster or emergency. The "History's Lessons" box offers a few examples. Some issued declarations have little or nothing to do with natural hazards or natural disasters and nothing to do with terrorism. In some cases, a problem is sufficiently anomalous that a president is not guided by existing law, policy, or precedent, yet he feels compelled to act and a presidential declaration of major disaster or emergency is an action tool at his disposal. The record of disaster declarations also connotes change in public attitudes about disaster, changes in federal-state relations, changes in various presidents' perception and use of disaster declaration authority, and changes in disaster law and management over time.

History's Lessons: Anomalous Problems Invite new Declaration Precedents

Occasionally, certain anomalous events invite presidents to use the discretion they have in disaster declaration authority to issue declarations for unprecedented phenomena. An example is the presidential response to Cuban president Fidel Castro's Mariel boatlift of Cuban evacuees to the United States in 1980. President Jimmy Carter issued an emergency declaration to reimburse Florida for the costs incurred in working with Cuban refugees from the boatlift.[41] This action handed FEMA a unique management task that had to be performed in cooperation with various federal and state agencies, most particularly corrections agencies, which were assigned the job of separating convicted criminals from the pool of refugees.

Sometimes presidents single-handedly, or in conjunction with Congress, transform or expand what officially constitutes a disaster.

In 1979 President Carter issued a controversial presidential declaration of a major disaster covering the Love Canal hazardous waste incident in a neighborhood of the City of Niagara Falls, New York. This action was one of the first to engage FEMA in buying out contaminated or endangered homes in the interest of public safety. The FEMA buyout program for houses and other properties became more common in future years, particularly for structures subject to recurring flood loss or from hazardous substance threats prohibitively expensive or technologically infeasible to correct.

In 1999 President Clinton's decision to approve New York governor George Pataki's West Nile virus emergency request (to cover pesticide spraying and public health costs) created a new category of federal emergency aid. Some analysts allege that federal activity in support of West Nile virus spraying was a pre-cursor of modern anti-pandemic or bioterrorism federal preparedness initiatives.[42] These decisions set precedents that led governors to conclude that they could ask for presidential declarations to cover similar problems and calamities.

On February 1, 2003, the space shuttle *Columbia* disintegrated in the atmosphere upon reentry from space killing its seven astronauts and scattering debris across several southwestern states. President George W. Bush exercised his disaster declaration authority and invited governors of the states engaged in searching for the remains of the astronauts and parts of the shuttle to request 100 percent federally funded emergency declarations that would reimburse their respective states and localities for the costs of searching for, protecting, and returning to the National Aeronautics and Space Administration (NASA) all physical and material remains. Texas, where most of the debris was eventually located, and Louisiana both applied for and received emergency declarations (EM 1371 and 1372, respectively) from the president for this purpose.

Presidents regularly turn down gubernatorial requests for major disasters or emergencies.[43] However, presidents sometimes approve requests for major disaster declarations when damage in the state is relatively light and the state may have been able to recover from the event without federal assistance.[44]

Sometimes disasters, particularly those that are catastrophic in magnitude, have transformed presidents and their administrations. Hurricane Camille (1969), and an ensuing weak and highly criticized federal response to that disaster, pressed President Nixon to assign various emergency management duties to an archipelago of federal agencies. The federal-state debacle in managing the response in Florida to Hurricane Andrew in 1992 damaged President George H. W. Bush's image, and although he narrowly won the state's electoral votes in 1988, it may have contributed to his defeat in the November 1992 presidential election. Once in office, President Clinton responded to the Hurricane Andrew failure by appointing a qualified and experienced state emergency manager to head his FEMA. In spite of controversial problems in some realms of his administration, Bill Clinton left office perceived as a president capable of managing domestic disasters, although perhaps less so terrorism. The terrorist attack disaster of September 11, 2001, moved President George W. Bush to quickly redefine his administration's primary mission as one of countering terrorism. Hurricane Katrina and the excoriated federal response to that disaster moved Congress to reconstitute FEMA as a full-service emergency management agency but one still embedded within the gigantic DHS. President Barack Obama confronted massively destructive Superstorm Sandy in November 2013, which generated major disaster declarations for thirteen Mid-Atlantic and Northeast states and property losses rivaling those of Hurricane Katrina in 2005.[45] In the spring of 2011 President Obama responded to a tornado outbreak and severe weather with seven major disaster declarations for southern states—Alabama hit the hardest with nearly three quarters of a billion in damage, some for the deadly Tuscaloosa tornado.[46]

Facilitating the President's Work

Disaster policy is very much event driven.[47] There is a tendency among policymakers to be influenced by, if not fixated upon, the latest memorable disaster or catastrophe. Certain disasters or catastrophes not only stress the nation's disaster management system but force massive reforms that produce a new normal in the domain of disaster policy and homeland security.[48] FEMA, whether independent or within DHS, is fairly good at managing "routine" disasters.[49] However, no single federal agency is invested with sufficient authority to adequately or proficiently cope with a catastrophe. It becomes the job of the president and his staff to orchestrate and oversee the work of many federal disaster agencies in catastrophic circumstances. Such work has to be carried out with the help and cooperation of governors, mayors, and other elected executives. A host of other players are involved as well, and these include state and local emergency managers, emergency responders, nonprofit organizations active in disasters, and private corporations, large and small.[50] This type of work is expected under the National Preparedness Plan and the NRF.

Presidents have help in addressing disasters and emergencies and in making judgments as to whether to approve or reject gubernatorial requests for presidential declarations of major disaster or emergency. Just as mayors are the personification of the cities they lead, and just as governors are the personification of the states they serve, each serving president is the personification of the nation as a whole. Presidents need help in determining when to intercede in matters of disaster and emergency. They need help in judging the worthiness of the declaration requests they receive. From 1979 to 2003, a FEMA director has advised each president about whether to approve or reject governor-requested declarations of major disaster. Since 2003 the FEMA administrator has advised the president directly or indirectly through the secretary of the DHS. FEMA directors may well have advised various presidents about governors' requests for emergency declarations too, but because governors do not need to elaborately demonstrate need in their emergency declaration requests, presidents and their White House staffs, perhaps in consultation with the FEMA director/administrator, often make emergency declaration decisions quickly and on the basis of life and safety considerations. The "How Things Work" box and Figure 4-1 present the presidential disaster declaration process in brief and a graphical representation about declarations. Who are the White House organizational players in matters of disaster policy and disaster management?

How Things Work: The Presidential Disaster Declaration Process in Brief[51]

Figure 4-1 The Declaration Process

The Presidential Disaster Declaration Process

Local/state/or federal response to an incident

Local/State Declaration of Emergencies made

Needs assessment conducted by responders to effectively utilize resources

Initial damage assessment conducted by local officials

Determination is made whether to request state and/or federal disaster assistance

If "yes" — Part 1 of the initial damage assessment ID forwarded to DEM by the requesting jurisdiction

DEM reviews the damage assessment with the requesting jurisdiction and disaster assistance provided to determine if the request is valid

If "no" — Recovery remains with the local officials

Requested disaster assistance provided. If "Presidential," a disaster field office is opened to coordinate activities.

Long-term recovery occurs

Appeal Denied / Appeal Granted

Appeal made

Request denied / Request granted

If "no"

If "yes" — If "Presidential"

If "Other"

Requester completes supplemental information and submits it to DEM.

Requester prepares part 2 of the initial damage assessment & DEM contacts FEMA to schedule the PDA

Federal and state inspection team completes the PDA

DEM compiles provided damage assessment information into a letter of request by the governor.

County/city pass a resolution officially requesting disaster assistance.

Data Verified

Incident over

Source: Homeland Security and Emergency Management, a Division of the Minnesota Department of Public Safety, www.hsem.state.mn.us/uploadfile/recovery_handbook/Chapter01/Toolkit/Pre_Disaster_Decl_Pro.pdf.

The Stafford Act (§401) requires that: "All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State." A State also includes the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. The Marshall Islands and the Federated States of Micronesia are also eligible to request a declaration and receive assistance.

The Governor's request is made through the regional FEMA office. State and Federal officials conduct a Preliminary Damage Assessment (PDA) to estimate the extent of the disaster and its impact on individuals and public facilities. This information is included in the Governor's request to show that the disaster is of such severity and magnitude that effective response is beyond the capabilities of his or her State and respective local governments and that Federal assistance is necessary.[52] Normally, the PDA is completed prior to the submission of the Governor's request. However, when an obviously severe or catastrophic event occurs, the Governor's request may be submitted prior to the PDA. Nonetheless, the Governor must still make the request.

As part of the request, the Governor must take appropriate action under State law and direct execution of the State's emergency plan. The Governor shall furnish information on the nature and amount of State and local resources that have been or will be committed to alleviating the results of the disaster, provide an estimate of the amount and severity of damage including the disaster impact on the private and public sector, and provide an estimate of the type and amount of assistance needed under the Stafford Act. In addition, the Governor will need to certify that, for the current disaster, State and local government obligations and expenditures (of which State commitments must be a significant proportion) will comply with all applicable cost-sharing requirements.

Based on the Governor's request, the President may declare that a major disaster or emergency exists, thus activating an array of Federal programs to assist in the response and recovery effort. Not all programs, however, are activated for every disaster. The determination of which programs are activated is based on the needs found during damage assessment and any subsequent information that may be discovered.

Some declarations will provide only individual assistance or only public assistance. FEMA hazard mitigation funding is also made available to states, and the respective localities, for FEMA-approved mitigation projects in most cases.

Source: The material for this feature section, excluding the chart, was taken from the U.S. Department of Homeland Security, Federal Emergency Management Agency, www.fema.gov/hazard/dproc.shtm.

The White House Staff

The White House staff consists of key aides whom the president sees daily—the chief of staff, congressional liaison people, the press secretary, the national security adviser—and a few other political and administrative assistants. Actually about 500 people work on the White House staff, most of whom see the president rarely but provide a wide range of services.[53] Some of these people play a role in helping the president consider governors' requests for declarations of major disaster or emergency.

Most presidents rely heavily on their staffs for information, policy options, and analysis. Different presidents have different relations with, and means of organizing, their staffs. President Carter was a "detail man," toiling ceaselessly over memoranda and facts. President Reagan was the consummate "delegator," who entrusted tremendous responsibilities to his staff. President George H. W. Bush fell somewhere between the Carter and Reagan extremes and was considerably more accessible than President Reagan. President Clinton, like Carter, was a detail man but someone who also ran an open White House with fluid staffing.[54]

History's Lessons: Presidents, News, and Public Relations

Over the past thirty or more years, presidents have taken a greater interest in disasters, particularly major ones. Disasters have become targets of camcorder politics in which political officials seek opportunities to be filmed at disaster sites in order to exhibit compassion and at the same time demonstrate responsiveness to the public, actions that may yield them political benefits.[57] In 1980, President Carter issued a presidential disaster declaration in Air Force One while flying over the volcanic eruption of Mount St. Helens in Washington State. President Reagan was once photographed shoveling sand into a gunnysack on the banks of a flooding Mississippi River after issuing a presidential declaration of major disaster. President George H. W. Bush was filmed commiserating with victims of the Loma Prieta earthquake in a heavily damaged San Francisco neighborhood, weeks after having issued a declaration for the quake. Television cameras showed President Clinton at shelters and inspecting freeway damage in the days after he issued a declaration for the Northridge earthquake. Similarly, President George W. Bush visited the Pentagon and the World Trade Center "ground zero" in the days after the 9/11 terrorist attacks to exhibit compassion, concern, and resolve to prevent future attacks. He did likewise after Hurricane Katrina in September 2005 when he visited Louisiana and toured flood-damaged areas inside New Orleans. In late May 2013, President Obama personally toured the Enhanced Fujita Scale 5 tornado damage zone in Moore, Oklahoma, where fourteen adults and ten children perished and where an estimated 1,200 homes and two elementary schools were destroyed, to commiserate with affected families and individuals and to offer reassurance of ongoing federal relief aid.[58] Today, Americans expect their president both to dispatch federal disaster help and to personally visit damaged areas. It is now customary for most of the president's cabinet, especially officials heading disaster-relevant departments, to visit major disaster sites.[59]

How presidents manage disasters and how responsive they are perceived to be to the needs of victims have far-ranging political and electoral consequences, which underline the importance of the role of the head of FEMA. How well the FEMA leadership manages the agency's response to disaster is of great political importance to the president and his staff.[60]

The Clinton administration appreciated the role of the news media in covering disasters. Both President Clinton and FEMA director James Lee Witt emphasized post-disaster public relations, in part because they believed the president's public image was at stake in disaster circumstances. The public requires reassurance that a president is doing all he can to help disaster victims. The need for the president to provide reassurance, backed by action, was underscored after Hurricane Katrina. Not only was President Bush perceived to have performed poorly in managing the early stages of the disaster, but he actually went on national television to apologize for his own behaviour and for the failures of the government's disaster response. Again there were political consequences. Heavy Republican losses in House and Senate races in the midterm elections of November 2006 were attributed to public dissatisfaction with the war in Iraq and with the Bush administration's poor performance in the Katrina catastrophe as well.

How the FEMA director and staff manage the federal response, and how they portray this effort to the media, shapes public opinion of both the presidency and the agency. Major disasters customarily, but not always, pull the nation together, encourage a centralization of authority, and often improve the president's approval ratings in public opinion polls.[61] Such activity promotes public awareness of the disaster across the state, nation, and world. It underscores the legitimacy of the government's response and of the presidency, and it may convey a greater sense of urgency to responders and to those considering the offer of help.

President George W. Bush was a delegator who followed a chief executive officer model of management and who preferred a less open White House. President Barack Obama tends to focus "at high levels where there's disagreement at agencies or among advisors—so he can move forward toward a decision.[55] Obama tends to let problems percolate up through his staff and senior administrators, often tolerating considerable disagreement, until he determines the right time to intervene. He is known as a regular mediator of disputes and he is skilled at pacifying his administrators after conflicts.

In any disaster or emergency, many offices are likely to engage in facilitating the president's work. Clearly, the White House Political Affairs Office and the Communications Office would be tasked to help the president address a disaster or emergency, especially in cooperation with the White House press secretary and press office. The White House Homeland Security Council and perhaps the National Security Council (NSC) would also be involved.[56] The "History's Lessons" box underscores how presidents must be aware of and responsive to news media coverage of disasters or emergencies, transpiring or impending, as these rapidly ascend to national newsworthiness.

White House officials in many different offices tend to keep their office televisions tuned to CNN, Fox, or MSNBC, among others, all day long so as not to miss breaking news that may come to involve the president or that may require the president's attention or action. Often breaking news about disasters, emergencies, or other calamitous events gets priority attention in the White House and in the Oval Office.

The Domestic Policy Council and Office of Cabinet Liaison would most likely help the president address various

emergency or disaster management activities. Within the White House staff, schedulers, speechwriters, and travel planners would also join in this effort, especially if the president were to make arrangements to visit the disaster area. Secret Service officials, military liaison, and medical personnel may also play roles, as would the Office of the Vice President.[62]

The Secretary, Department of Homeland Security

The DHS secretary is a member of the president's cabinet. The Homeland Security Act of 2002 authorized creation of DHS, a superdepartment with some 180,000 employees. It was formed by transferring some twenty-two federal agencies or offices into the new department. The DHS secretary and deputy secretary are managerial supervisors of the FEMA administrator.

The Federal Emergency Management Agency Director

The FEMA director/administrator is a politically appointed official who is often personally selected by the president, and typically that person is one of his political confidants. Since the creation of FEMA in April 1979, some FEMA directors/administrators have had previous experience in emergency management and some have not.

The head of FEMA is in effect the chief executive officer of the agency, although some who have been appointed to the post have been satisfied in delegating day-to-day management of the agency to the deputy administrator. Under the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006, the FEMA administrator has been given a more direct line of access to the president, albeit with expected consultation of the DHS secretary during periods of disaster response and when carrying out his or her responsibility to help in the processing of emergency and major disaster declaration requests submitted by governors.

Typically, the route of a governor's request starts with the regional FEMA director, who receives a request, reviews it, and sends a recommendation to FEMA headquarters in Washington. There, a declaration pro-cessing unit prepares documents pertaining to the request, and the administrator of FEMA, after compiling information for the president about the event and, often, consulting with the governors who have requested the declarations, adds a memorandum recommending to the president a course of action: approve or reject. All the information FEMA sends to the president, including the director's recommendation, is protected by rules of executive privilege and therefore unavailable for public scrutiny. The president is neither bound by FEMA's recommendation nor obligated to follow the agency's declaration criteria. The president alone determines whether to approve or reject every governor's request.

Here are some common factors FEMA officials consider before they make their recommendation:

- number of homes destroyed or sustaining major damage
- the extent to which damage is concentrated or dispersed
- the estimated cost of repairing the damage
- the demographics of the affected area
- state and local governments' capabilities

The Stafford Act does not prescribe exact criteria to guide FEMA recommendations or the president's decision. As a prerequisite to federal disaster assistance under the act though, a governor must take "appro-priate action" and provide information on the nature and amount of state and local resources committed to alleviating the disaster's impacts. Other relevant considerations include the following:

- the demographics of the affected areas with regard to income levels, unemployment, concentrations of senior citizens, and the like
- the degree to which insurance covers the damage
- the degree to which people in the disaster area have been "traumatized"
- the amount of disaster-related unemployment the event has produced
- the amount of assistance available from other federal agencies, such as the SBA and its disaster loans to homeowners and businesses
- the extent to which state and local governments are capable of dealing with the disaster on their own
- the amount of disaster assistance coming from volunteer organizations and the adequacy of that assistance given the magnitude of the disaster
- the amount of rental housing available for emergency occupancy
- the nature and degree of health and safety problems posed by the disaster and its effects
- the extent of damage to essential service facilities, such as utilities and medical, police, and fire services[63]

FEMA also evaluates the impacts of a disaster at the county, local government, and tribal levels. It consid-ers the following:

- whether critical facilities are involved
- how much insurance coverage is in force that could provide affected parties reimbursement for various losses
- the degree of hazard mitigation a state or local government has undertaken prior to the disaster
- recent disaster history of the respective state and its localities
- the availability of federal assistance aside from that to be provided by a presidential declaration

Factors that reduce the chances that a governor's request for a presidential declaration of major disaster or emergency will be approved are several. Obviously, major infrastructure loss and widespread or intense human suffering advances deservedness, whereas ample insurance coverage that helps alleviate loss and advance recovery diminishes worthiness. Also, when there is evidence that the requesting governments failed to take reasonable steps to mitigate against the effects of the disaster before it transpired, or when state or local negligence is apparent, deservedness goes down.

Sometimes other federal agencies besides FEMA host disaster programs that may sufficiently address the needs of the disaster in question, such that a presidential declaration of major disaster or emergency is unnecessary. Governors contemplating or actually in the process of filing requests for presidential declarations may be dissuaded from doing so by FEMA or White House officials, who steer them to federal agencies better suited to assist them in their response and recovery given the nature of the event. For example, when the I-35 bridge disastrously collapsed in Minneapolis in August 2007, a presidential disaster declaration was unnecessary because the U.S. Department of Transportation (DOT), aided by the U.S. Army Corps of Engineers (USACE), the FBI, and other federal agencies, made available help and resources such that a presidencial disaster declaration was unwarranted.[64]

When a governor seeks a presidential declaration for an incident that does not conform to standard eligibility requirements, FEMA may recommend to the president that the governor's request be denied.

FEMA relies most heavily on how the assessment of a state's capability compares with the costs imposed by the disaster. Each governor requesting a declaration is expected to demonstrate to FEMA and the president that the state is "unable to adequately respond to the disaster or emergency," of whatever nature, and that federal assistance is therefore needed. The "unable to adequately respond" condition is often highly controversial. Some governors claim that state budget limitations make it impossible for them to "adequately respond." Some claim that they do not have reserve funds sufficient to pay for the costs of the response.

Some governors indicate that their state has no disaster relief program in law to match FEMA and so in the absence of a presidential declaration many victims will be without government assistance. FEMA, and the president's, ability to judge "unable to adequately respond" is often complicated by news media coverage of the event, political pressures imposed on both FEMA officials and the president by legislators and other officials in the damage zone, and the difficulty of calculating state (and local) disaster response and recovery capacity.

Under the Public Assistance program (the government-to-government aid program that pays for infrastructure repair and reimburses certain disaster expenses of nonprofit organizations), FEMA examines the estimated cost of the assistance, using such factors as the cost per capita within the state. In 2007 FEMA used a figure of $1 per capita damage costs as an indicator that the disaster is of sufficient magnitude to warrant federal assistance. This figure was adjusted annually based on changes in the Consumer Price Index. By 2012, the state per capita damage cost threshold rose to $1.35,[65] and because it is pegged to the Consumer Price Index, the 2013 state per capita damage threshold rose to $1.37. In addition, FEMA established for each county a cost-indexed threshold of $2.50 per capita.[66] The Tennessee Emergency Management Agency disclosed in 2013, "Two thresholds must be met under the Stafford Act, a state threshold and a county threshold. These thresholds are based on a pre-determined legal formula that disaster damages must exceed."[67] At this writing, the formula uses population of the jurisdiction as determined in the 2010 official U.S. Census. Population is then divided into estimated damage cost.

For example, the FEMA general threshold of recommended qualification for Tennessee counties is $3.45 per capita and $1.37 per capita for the entire state of Tennessee. The Tennessee state threshold equates to about $8.5 million in disaster costs.[68] In other words, estimated disaster cost for each respective impacted county is divided into the respective county's population recorded in the most recent decennial U.S. Census. The resulting per

capita loss figure is compared to the FEMA county per capita loss threshold figure for Tennessee. Presumably, if the disaster's per capita county loss figure exceeds the FEMA county per capita loss threshold, FEMA recommends that the president issue an approval. Conversely, when the county per capita loss total is "less" than the FEMA county per capita loss threshold, one can logically assume that FEMA recommended that the governor's request for a major disaster declaration be denied.

Remember that there is a "county" track and a "state" track. For the state track, the estimated disaster costs for each county the governor includes in her or his request is cumulated and added to the state government's own disaster costs. The resulting figure is then divided by the population of the entire state in the most recent U.S. Census, thus yielding the state's per capita loss figure. If this amount exceeds the FEMA per capita loss threshold for the state (a total determined by FEMA administratively well in advance of the disaster in question), presumably the agency recommends that the president approve the governor's major disaster declaration request. State per capita loss totals that fail to meet or exceed the FEMA threshold usually are sufficient evidence to FEMA officials that the governor's may warrant a presidential turndown.

However, it is difficult and sometimes impossible for FEMA officials to ascertain that an event is worthy of a presidential declaration unless Preliminary Damage Assessments (PDAs) are first conducted and analyzed (often through photographs or video recordings) or unless media coverage of the event makes it obvious a major disaster has occurred. Moreover, it is difficult to judge whether state and local areas are capable of recovering on their own if disaster damage has not been assessed beforehand. Consequently, sometimes the president issues declarations of major disaster or emergency without documentary evidence that the disasters have met FEMA criteria.

The Role of Congress

Lawmakers care deeply about disasters, emergencies, and the substance and process of presidential declaration issuance. When the Disaster Act of 1950 became law, Congress was tacitly conceding that it should not be in the business of legislating disaster relief for every disaster or emergency that transpires in the United States. Nevertheless, Congress as an institution and congressional lawmakers themselves enter into the politics and policy of disasters in myriad ways. When a disaster or emergency is threatened or is imminent, lawmakers representing jurisdictions in the threatened zone often press the president to mobilize federal help or issue a declaration of emergency. Some researchers have discovered in presidential library documents evidence that presidents considering a disaster declaration request submitted by a governor receive, as a matter of routine, a list of the names of the lawmakers whose districts are affected by a disaster event.[69]

Senators and representatives often petition the president as an entire state delegation to confer a declaration. Moreover, lawmakers frequently contact the White House about matters of disaster or emergency. Sometimes individual legislators seek audiences with the president or with White House staff to press for federal help.

FEMA has many overseers within Congress. Before FEMA was folded into the DHS, it had a wide variety of House and Senate committees and subcommittees with jurisdiction over its programs in whole or in part. Since FEMA entered the DHS, Congress has reorganized these committees such that there is now a House Committee on Homeland Security. Moreover, the former Senate Governmental Affairs Committee elected to expand its title to become the Committee on Homeland Security and Governmental Affairs. However, many of the twenty-two federal agencies folded into DHS retain their traditional jurisdiction and so retain their traditional House and Senate committee and subcommittee overseers, the vast majority of which are not within the two House and Senate homeland security committees. This significantly complicates management of DHS units and risks muddled congressional oversight of those units.[70]

Lawmakers are key players in matters of furnishing federal money for disaster relief. The president's Disaster Relief Fund has been administered by DHS-FEMA since 2003 and is replenished by "no-year" appropriations monies. *No year* simply means that there is no time limit attached to the spending authority of an appropriation law. The fund receives an annual congressional appropriation, but it is often insufficient to cover federal payouts for declared disasters and emergencies during the federal fiscal year. Congress has the power to approve emergency supplemental appropriations to recapitalize the fund. Congress never lets the Disaster Relief Fund exhaust its spending authority. Even if the fund's budget authority was exhausted, the president is legally permitted to borrow money from the Treasury to pay federal expenses for declared disasters.[71]

The tendency is for each administration and its disaster agency to ask for the maximum emergency supplemental appropriation they think necessary. It is always better to estimate high rather than low, as no administration wants to have to return to Congress to seek an additional emergency supplemental for the same disaster (although this sometimes happens). Because these appropriations come with no spending expiration date, and because the disasters they are aimed at often end up costing the federal government less than the total spending authority conferred, spending authority in the fund often accumulates and so pays for other, smaller disasters and emergencies. However, great disasters or catastrophes periodically swallow up all of the fund's spending authority. It is then that Congress goes to work on emergency supplemental appropriations.

The politics of congressional enactment of emergency supplemental appropriations often makes it obvious why Congress should continue to entrust the president with the bulk of routine declaration authority. Emergency supplementals must, like all legislation to be enacted into law, pass both the House and Senate. Whether or not an emergency supplemental is open to "riders" (non-germane legislation attached to a bill) in either body is often both controversial and consequential. Individual lawmakers often add to emergency supplementals riders that could never win majority support were they not attached to these "must pass" emergency supplementals for disasters.

Presidents have come to detest emergency supplementals because those measures often come to the Oval Office laden with riders that confer pork barrel or special interest benefits he (and probably majorities in Congress) would never otherwise approve were they not part of a "must pass" bill. As the president has no line-item veto to remove what he judges to be undeserved riders, he is more or less compelled to sign the emergency supplementals into law or otherwise be judged heartless and unresponsive to the needs of disaster victims who are awaiting the federal help the supplemental will provide. Emergency supplementals pose other problems. They often drive up the federal deficit and so may damage fiscal policy. The legislative process is often slow and cumbersome, even if riders are not permitted on the emergency supplemental.

Some Republican and Democratic lawmakers have come to view emergency supplementals for disaster as a form of redistributive politics in which a zero-sum game applies. One part of the nation gains at the expense of another part of the nation. Some have alleged that states with large congressional delegations that frequently experience disasters or emergencies have "gamed" the system in a way that funnels excessive federal resources to their post-incident redevelopment.

On August 22, 2011, a 5.8 magnitude earthquake with an epicenter located in the central Virginia 7th district of Republican House majority leader Eric Cantor struck the Mid-Atlantic. Congressman Cantor is a deficit hawk, who has regularly complained that alleged excessive federal disaster spending, because it rests so much on Treasury borrowing, drives up the annual federal budget deficit adding to the burgeoning national debt. Cantor has said, "All of us know that the federal government is busy spending money it doesn't have."[72] Virginia governor Robert F. McDonnell requested a major disaster declaration covering damage in Cantor's hard-hit Louisa County. President Obama in consultation with FEMA officials initially denied the request in early October, but the governor successfully appealed the turndown and the president's declaration came through approved in November.[73] Cantor did not seek to deny his constituents federal disaster relief as much as he wanted federal funding for this relief to come from offsetting reductions in other federal spending programs, for the purpose of budget neutrality. Cantor is not alone in his complaint about federal spending on disasters.

The Conservative Center for American Progress, drawing from annual federal departmental disaster spending records concluded that for fiscal years 2011 through 2013 inclusive, a total $136 billion of tax-payer funds or "an average of nearly $400 per household,"[74] had been expended. The center article maintains that the federal Office of Management and Budget, as well as Congress, routinely underestimate federal disaster spending and so fail to budget adequate funds in advance of disaster, thus necessitating federal borrowing when budgeted funds are exhausted during a fiscal year.[75]

On top of this, presidential and congressional political considerations are alleged to affect "the rate of disaster declaration" issuance and the allocation of FEMA disaster expenditures across states.[76] Researchers have shown that states politically important to the president have relatively higher rates of disaster declaration request approvals than other states. They have also discovered that federal disaster relief expenditures are relatively larger in states having congressional representation on FEMA oversight committees than in states unrepresented on FEMA oversight committees. Remarkably, one pair of political economists posited a congressional dominance model, which predicts that nearly half of all disaster relief is motivated politically rather than by need.[77] The same researchers assert that there is a possibility that political influence may affect the outcome of gubernatorial requests for presidential disaster declarations at two distinct stages: during the initial decision to declare a disaster or not and in the decision of how much money to allocate for the disaster.[78] Here they assume that bureaus, like FEMA, follow congressional preferences and that the responsible congressional committees, FEMA jurisdictional overseers, make sure that they do so. Here legislators are assumed to behave as wealth maximizers seeking to direct federal resources to their home states or districts.[79]

However, the political geography of declaration issuance demonstrates that the FEMA alleged effort to reward legislators (the congressional dominance model) on its authorizations or appropriations oversight committees is far-fetched and arguable. This is because the ultimate decision to approve or reject a governor's request for a declaration is made by the president, not by FEMA officials. In effect, FEMA officials have little leeway in matters of presidential declaration decision making. FEMA officials compile a recommendation to the president regarding

whether a governor's request for major disaster declaration should be approved or denied.

Presumably, FEMA officials have considered the worthiness of a governor's request in accord with thresh-olds of loss at the state and county levels. The FEMA director (since 2002 in consultation with the DHS secretary) provides the president with his own recommendation on whether the president should approve or reject the governor's declaration request. It is highly unlikely, although difficult to prove, that any FEMA director would engage in strategic behavior aimed at placating the desires of lawmakers on FEMA oversight committees by endorsing unworthy or undeserving requests for presidential approval. It is difficult to prove this because the FEMA director's memorandum to the president is a matter of executive privilege and so is not open to public scrutiny. Moreover, every president is free to disregard the FEMA director and agency recommendation on any governor's request for a presidential declaration of major disaster or emergency.

Still, presidents, on their own, may use their declaration issuance discretion to reward states that are the political homes of key House and Senate legislators and to advance electoral strategies beneficial to themselves, to their fellow party members on Capitol Hill, and to other political actors they judge to be important, including the requesting governors themselves.[80] The Stafford Act (1988) allows the president to unilaterally declare a disaster without the approval of Congress. Hence, the president may use this power to punish or reward legislators who support or oppose his policies. He may also want to "simply tarnish the image of opposing party legislators in hopes of reducing their probability of reelection."[81] Owing to the vague language of the Stafford Act and preceding federal laws since 1950, the president is free to decide what constitutes a disaster or emergency and free to decide whether or not he wants to issue a presidential declaration for the event."[82] This is even more the case since the 9/11 terror attacks, since enactment of the Homeland Security Act of 2002, and since the issuance by President George W. Bush, and later President Barack Obama, of a series of homeland security presidential directives. Since 9/11, Congress has accorded the president powers that have vastly increased presidential discretion in matters of disaster.

The Role of Governors

Many governors, as state chief executives, possess emergency powers applicable to disasters or emergencies within their respective states. They have at their disposal state emergency management agencies, other state agency assistance, and the state's National Guard (along with reserve and active-duty forces made available by the president, if needed).

Through state legislative work and often governor assistance, state governments enact emergency management laws. A variety of state agencies fashion codes and regulations subject to supervision by the governor and oversight by the state legislature. State government is a conduit through which extensive federal-local interchange takes place. In turn, state governments are responsible for implementing and enforcing a great many federal laws, among them federal emergency management laws. States are obligated to assist their respective local governments in development and maintenance of emergency management responsibilities.

Governors play a key role in the presidential declaration process. They need to mobilize and supervise their state agencies as those agencies address the emergency or disaster. They need to ensure that disaster loss information has been compiled and included in their request to the president. They need to consult and work cooperatively with local elected executives and other local government officials who are in the areas affected by the disaster or emergency. When a disaster strikes, local authorities and individuals often request help from their state government as well as private relief organizations. Local governments sometimes seek federal disaster assistance, often with state encouragement. Customarily, the process begins when county or municipal leaders, or both, ask their governor to declare a state emergency. These same local officials may ask the governor to request a presidential declaration. Governors may issue, if they believe it is warranted, a state declaration of disaster. They typically do this through an executive order or proclamation. The order usually describes the nature of the emergency, where it occurred, and the authority under which the governor makes the declaration.

Often, governors request presidential emergency declarations when a disaster seems imminent and federal aid would help in the pre-event response stage of a disaster. Many of these emergency declarations cover events that do not later earn a presidential declaration of major disaster.

Customarily, a governor must ask the president to declare a major disaster or emergency. However, the Stafford Act of 1988 and several preceding laws empower the president to declare a major disaster (since 1950) or emergency (since 1974) "before" a governor asks for one or in the absence of a governor's request altogether. All governors have the authority to request a declaration. Sometimes in the interest of speeding mobilization a governor may submit an expedited request bypassing the usual process of submitting the request with damage estimates by asking the president and FEMA directly. In addition, federal law permits presidents to issue declarations of major disaster or emergency in the absence of a governor's request when there is a major federal interest (the federal government is a directly involved party in the event) or when a governor is unable officially to request a presidential declaration.

Although the president has legal authority to issue a declaration of major disaster or emergency in the absence of a governor's request, presidents are reluctant to do so and usually do so only in truly extraordinary circumstances unless they choose to completely waive the state's matching share of declaration costs. Obviously, presidents do not want to commit a state and its localities to paying the state's share without first receiving a request from the governor that stipulates that the state is willing take on such a burden.

Governors customarily consult their respective state emergency management officials before requesting a presidential declaration. The governor may authorize a state-level PDA if state officials are not already assessing damage with local authorities. Sometimes, if the disaster appears to be beyond state and local response capacity, the governor can ask FEMA to join state and local personnel in conducting a PDA. On account of the vagueness of the criteria FEMA uses to judge governor requests to the president, plus each governor's keen awareness that under federal law the president can disregard any FEMA recommendation to deny a major disaster request which fails to meet the agency's criteria, governors must contemplate whether to request presidential declarations in an

uncertain environment. They can consider previous presidential approvals and turndowns as precedents. They can gauge the degree of newsworthiness their state's calamity has drawn. However, the mere fact that their disaster request may not qualify for a declaration under FEMA critieria is seldom enough to deter them from asking the president to issue their state and its impacted localities a declaration. The "How Things Work" box encapsulates, from a governor's perspective, the twin issues of vague FEMA criteria and subjective presidential decisions.

Governors, in requesting emergency declarations, do not have to prove to the president that the emergency disaster is beyond state and local response capabilities. Instead, they have to demonstrate that federal assistance is needed to save lives, protect property and public health, or lessen or avert the threat of catastrophe. Under federal law, FEMA expenditures under an emergency declaration may not exceed $5 million.[83] However, when an emergency declaration is in effect and federal spending approaches the $5 million limit, the president need only notify Congress in a letter that the $5 million cap will be exceeded and this allows spending on the emergency declaration to exceed the limit. Many events that have earned emergency declarations have exceeded $5 million, and the president has routinely notified Congress that spending would exceed the cap in these incidents. Governors appreciate presidential declarations of emergency because they supply federal funds and other assistance quickly, do not require the collection of state and local information to document need, and often furnish help when the full scope of the emergency or disaster is either not yet understood or is still unfolding.

The Federal Emergency Management Agency's Role and Presidential Disaster Declaration Totals

The federal declaration process usually follows these steps. If the governor requests a major disaster declaration through FEMA the agency prepares a White House package. The package contains documents prepared for the president's action on a governor's request. The package includes the governor's request and the FEMA director's memorandum, made up of the following items:

- a summary of significant aspects of the event
- statistics relative to damage and losses
- outlines of the contributions made by federal, state, local, and private agencies
- a list of the unmet needs for which the governor seeks federal assistance
- a recommended course of action for the president

The package also contains appropriate letters and announcements related to the action, including the FEMA director's recommendation to the president regarding whether to approve or deny the governor's request.

In many cases the FEMA regional office initially receives the governor's request first; officials there prepare a regional summary, analysis, and recommendation. The summary contains only factual data concerning the disaster event, whereas the analysis and recommendation sections may contain opinions and evaluations. The FEMA regional office forwards the governor's request along with the regional summary, analysis, and recommendation to FEMA national offices. At headquarters, the director and senior FEMA staff evaluate the request, prepare the White House package, and then forward it on to the president accompanied by the FEMA director's recommendation. The president is free to accept or reject the governor's request. Finally, the president makes a decision to either grant or deny the request.

How Things Work: Vague Criteria and Political Subjectivity

For many years, the process and criteria of disaster declaration has been purposely subjective to allow the president discretion to address a wide range of events and circumstances. Beyond the annual statewide per capita damage thresholds and county per capita damage thresholds set by FEMA to advise the president, governors and their state disaster officials have little to guide them in estimating whether to go ahead with a request for presidential declaration of major disaster or emergency. They have little basis for concluding in advance whether their petition for a presidential declaration will be approved or denied.

However, as long as a governor or other state officials know that the state can afford to shoulder the 25 percent share of the 75 percent/25 percent federal aid formula contained in a presidential disaster declaration, they have an incentive to request a federal declaration. State officials have an incentive to "cry poor" in petitioning for federal help, minimizing their own capacity and capability to address disaster.

Some argue for reducing presidential discretion in the review of governors' requests for disaster declarations and often point to the disaster declaration systems used by Canada and Australia. Canadian provinces and Australian states and territories rely less upon federal assistance during disasters than do U.S. states. In Canada and Australia (nations with federal systems), "there is no requirement for an explicit disaster declaration" by the prime minister and "the decision to authorize federal reimbursement is essentially automatic."[84] Canadian provinces and Australian states and territories must pay out sums in disaster relief that exceed certain deductible levels before they qualify for their respective nation's federal assistance. It should be noted that the provinces, states, and territories of these two nations are expected to shoulder the brunt of disaster management and relief duties, in service to their local governments.[85]

Some recommend making declaration judgments more of an administrative determination under which states would have to experience preset thresholds of damage to qualify; states would be expected to pay an upfront deductible sum of money and pay a much larger share of the total cost than the 25 percent that is now the state share in the United States.

Such proposals are interesting, but they tend to overlook the fact that American states come in all shapes and sizes. Some states cover huge expanses of land but contain relatively few people (Alaska, Montana, New Mexico, Nevada, North Dakota, Utah, Wyoming, etc.); some have relatively small populations and small land area (Delaware, New Hampshire, Rhode Island, Vermont). Moreover, there are heavily populated states that also cover massive land areas (California, Texas, etc.).

The issue here is that American demographics make it difficult if not arbitrary to impose disaster deductibles on states and territories. American disaster declaration history shows that presidential discretion may take the degree of human suffering into account even if losses are relatively light and damage is confined to a small area. There are many examples of a presidential disaster declaration issued to a single county in a single state, the most notable perhaps being the declaration that went to New York State and New York City after the first World Trade Center bombing in 1993.[86]

Americans would be expected to oppose the idea of disaster deductibles for their states for a variety of reasons. First, using deductibles as thresholds for issuing federal declarations limits presidential flexibility to address disasters and emergencies. Second, it makes deservedness depend on loss accounting rather than on other indicators of need. Third, Americans, unlike a few of their elected representatives, probably do not generally perceive presidential disaster declaration spending as redistribution of taxpayer monies from one state to another. Few would conceive of federal disaster spending as a zero-sum game in which one part of the nation gains unfairly at the expense of another part of the nation. Fourth, the massive economic integration of the nation and the pervasiveness of global trade and economic transactions create a national interdependence. A small disaster in Florida may have significant economic consequences for interests in California, Massachusetts, Michigan, or Texas.

Some may find it ironic that giant European reinsurance companies worry deeply about hurricanes threatening strikes along the U.S. Gulf or Atlantic coasts. A major earthquake in California could easily, though temporarily, wipe out the liquidity of American auto insurance firms, protracting the claim settlement of a fender bender in Massachusetts. Some disasters affect entire regions of the United States, and it would be foolish to discriminate between states in a massive damage zone on the basis of a deductible payment system of loss.

Many emergency declarations, more than major disaster declarations, are likely to stretch the rule that states must lack the capacity to recover on their own to qualify for a presidential declaration. In times of tight state and local budgets, or when they are in deficit, an emergency offers governors a flexible path for securing federal help. FEMA records disclose that snowstorms, windstorms, minor flooding, and drought are the most common types of emergency declarations. Emergency requests, even more than for major disaster requests, allow politically subjective determinations to come into play.

Today, when human health and safety is threatened, and a disaster is imminent but not yet declared, the secretary of the DHS may position employees and supplies before the event. DHS monitors the status of the circumstances, communicates with state emergency officials on potential assistance requirements, deploys teams and resources to maximize the speed and effectiveness of the anticipated federal response, and, when necessary, performs preparedness and PDA activities.[87]

Early after its inception, FEMA developed a general set of criteria by which the president may judge gubernatorial requests for declarations of major disasters or emergencies. However, the president is not legally bound to use or follow those criteria. A governor's request for disaster or emergency relief is not necessarily granted. As mentioned,

presidents can issue a turndown. A turndown is the action authorized by the president and signed by the director of FEMA that denies a governor's request for a major disaster or emergency declaration. Every president from Truman to Obama has turned down some gubernatorial requests for declarations (see Table 4-1). The president is as free to turn down emergency declaration requests as he is to turn down requests for presidential declarations of major disaster. Declarations, even if approved, may embody denial of certain kinds of assistance and may deny inclusion of certain areas. In other words, declarations stipulate approval and disapproval of certain requested program assistance.

In addition, sometimes presidents approve governors' requests submitted as emergencies but then go on to declare the events major disasters later. The president initially approved as emergencies the bombing of the Oklahoma City Murrah Federal Building and the 9/11 attacks on the World Trade Center and the Pentagon, but within hours the president declared each a major disaster. Presidents do not need a second gubernatorial request to elevate an emergency to a major disaster. The decision may flow logically from official recognition that the emergency phase of lifesaving and property protection is at an end and a major disaster declaration is needed to mobilize the additional federal agencies, spending, and resources necessary in disaster recovery.

Moreover, governors may request that certain localities (usually counties or the state's equivalent of counties) be added to a presidential declaration already in force.[88] Since 1988, the federal coordinating officer (FCO) assigned to respond to the disaster, not the president, has possessed the authority to add counties to a presidential declaration of major disaster.[89] If the president denies a governor's request for a declaration, that governor has the right to appeal. In rare instances, a governor may win a declaration on appeal.

Table 4-1 Presidential Approvals and Turndowns of Governor Requests for Disaster Declarations, May 1953–January 2013

Table 4-1 Presidential Approvals and Turndowns of Governor Requests for Disaster Declarations, May 1953–January 2013

President	Time span	Approvals			Turndowns			Turndown percentage		
		Major[a]	Emerg[b]	Total	Major[c]	Emerg[d]	Total	Major	Emerg	Total
Eisenhower	5/2/53–1/21/61	106	0	106	55	0	55	34%	0%	34%
Kennedy	1/21/61–11/20/63	52	0	52	22	0	22	30%	0%	30%
Johnson	11/23/63–1/21/69	93	0	93	49	0	49	53%	0%	53%
Nixon	1/21/69–8/5/74	195	1	196	102	15	117	52%	94%	37%
Ford	8/5/74–1/21/77	76	23	99	35	7	42	32%	23%	30%
Carter	1/21/77–1/21/81	112	59	171	91	37	128	45%	39%	43%
Reagan	1/21/81–1/21/89	184	9	193	96	16	112	34%	64%	37%
G.H.W. Bush	1/21/89–1/21/93	158	2	160	43	3	46	21%	60%	22%
Clinton	1/21/93–1/21/01	380	68	448	103	13	116	21%	16%	21%
G.W. Bush	1/21/01–1/21/09	458	140	598	89	28	117	16%	17%	16%

B. Obama	1/21/09– 1/31/13	283	59	342	32[*]	5[*]	37[*]	10%	8%	10%
Total		2097	361	2458	717	124	841	25%	26%	25%

Sources: (a) and (b) FEMA, Declaration Information System (DARIS), June 1997, and Federal Emergency Management Information System (FEMIS), December 2001, Department of Homeland Security, Emergency Preparedness and Response Directorate; FEMA, DFSR Obligations Summary—Grouped by Event and Year, Reporting Cycle through January 2013, Automated DFSR Report Export to Excel, database compiled by Bruce Friedman, Manager CFO-FST and (c) and (d) DHS Justification of Estimates fiscal year 04, March 2003; 9/11/01–9/22/05 turndown data: Sen. Thomas R. Carper, D-DE, to author. FEMA, Turndowns of Major Disaster and Emergency Governor Requests through December 2011, compiled by Dean Webster, February 14, 2012.

Note: Date of declaration checked for each administration to the day.

* Please note, in this table President Obama's turndown data begins January 21, 2009, and ends December 31, 2011. Remember, turndown percentage is the number of turndowns as a percentage of total requests for the respective category, such that turndown requests and approval requests are summed in the calculation.

a. Represents approved presidential declarations of major disasters, which began in 1953.

b. Represents approved presidential declarations of emergencies. Emergency declarations began in 1974.

c. Represents president's turndown of a governor's request for a presidential declaration of major disaster.

d. Represents president's turndown of a governor's request for a presidential declaration of emergency.

Presidents and Distributive Politics

Over the years federal disaster officials have attempted to establish definitive and quantitative requirements for disaster declaration eligibility. One such effort would have tied declarations to damage translated into dollars per capita.[90] These efforts proposed rigorous declaration criteria, but presidents have resisted and Congress has vehemently opposed such measures.[91] Presidents do not want their range of declaration discretion further circumscribed or ceded to federal disaster officials.[92] Legislators want assurance that they may use their legitimate political influence to press for declarations directly from the president when their home states and districts experience incidents or events they consider emergencies or disasters.[93]

Presidents, assisted by their staffs and top disaster agency officials, must judge each governor's request for a declaration based on need. However, both managerial and political factors may enter the president's judgment. Clearly, initial damage assessments, imminent disaster threat (e.g., a hurricane about to make landfall), news media coverage of an event, and the like may make it obvious to the president that a governor's request deserves approval.[94] There are also many instances when presidents, and perhaps their advisers, are unconvinced of the need or worthiness of the request. Still, the president makes these determinations in a political environment.[95]

Disaster declarations have been called an easy-to-use political tool of the president. Using data provided in Table 4-1, from January 1989 through June 2013, presidents (George H. W. Bush, Bill Clinton, George W. Bush, and Barack Obama) have turned down as a collective group 19.65 percent of the major disaster declaration requests they have received. Table 4-1 data for the same period shows that about 20.9 percent of emergency declaration requests have been denied by the president. When the requests are accepted, FEMA, not the president, decides how much money to allocate. Remember that a major share of FEMA funding to eligible parties under a major disaster or emergency declaration is through means-tested applicant-driven programs similar to entitlements. Conversely, a very substantial share of FEMA funding goes out under public assistance (government to government) aid, which requires formal application administered as project grants of various types. Proving disaster declaration worthiness and need is, for better or worse, often an issue of public money. The "How Things Work" box summarizes the problem of dollar loss estimation and ability to (financially) recover in the absence of a federal declaration of major disaster.

History demonstrates that from May 1953, the time of the first serially numbered presidential disaster declaration, until January 2013, the president has approved about three in every four (75 percent) gubernatorial requests for declarations of major disaster and emergency. Since 1989, following adoption of the Stafford Act, the chance that the president will approve a governor's request has risen to about a four in five (80 percent) chance (see Table 4-1).[96] Certainly, the broader authority to judge what is or is not a disaster under the Stafford Act has provided presidents since 1988 with more latitude to approve unusual or "marginal" events as disasters or emergencies. This may be one reason for the higher rate of gubernatorial request approvals since 1988.

During his four years in office, President George H. W. Bush averaged thirty-nine disaster declarations annually. The seven years of the Clinton presidency that Reeves studied averaged seventy-two disasters per year.[97] In his 2011 paper, Reeves reports that for presidential disaster declarations issued from 1981 through 2004, "electoral considerations have come to shade a policy," referring to presidential disaster declaration issuance, "that should be firmly based on need."[98] Reeves reports that prior to the Stafford Act (1988) there was virtually no statistically significant correlation between the presidential electoral competitiveness of each state and its respective disaster declaration count.[100] He is referring to statewide presidential election contests in which an incumbent president is competing to win state electoral votes, especially in certain battleground states. He asserts that "voters react and reward presidents for presidential disaster declarations."[101] Sylves and Buzas find that in general election years when incumbent presidents seek a second term, there is statistically significant evidence that governors of battleground states important in the president's reelection calculus experience extremely low disaster declaration request turndown rates.[102] In other words, these governors appear to hold an advantage over other governors when seeking presidential declarations of major disaster. Yet this benefit is confined to the months of the year

before the general election and then only when a sitting president is seeking a second term.

Political parties view particular states as "friends," "enemies," or "competitive," based on their likelihood of voting for the party's presidential candidate.[103] When it comes to disaster declarations and presidential political strategizing, "the size of the state (in terms of electoral votes) and whether the political parties view it as 'competitive' matters quite a bit."[104]

Large states friendly to the president appear to be more successful in winning declarations than large, unfriendly states. Reeves shows, "The incumbent president (or his party) is rewarded by voters for providing relief in the wake of natural disasters to the tune of over 1.5 points in the statewide popular vote."[105] For Reeves, "the Stafford Act transformed the disaster declaration process into a highly political exercise."[106] Studies by Reeves, Garrett and Sobel, and Dymon infer that the pattern of presidential declaration approvals is consistent with the "politically driven, distributive politics" model. When declarations are examined in terms of political geography and elections, it seems that presidents, at least since 1988, are acting "on the basis of political motives, political pressures, and political responsiveness more than they are issued on the basis of objective need."[107] Governors of large and heavily populated states enjoying a sizable number of electoral votes and previously supportive of the incumbent president may seek to capitalize on this advantage and ask for declarations more often than they normally would. From this perspective, we would expect political factors to influence the odds of receiving a presidential disaster declaration.

Assuming the president does generally follow the recommendations, governors may find that asking for declarations when losses or damage are less than the recommendations runs the embarrassing risk of having a request turned down. Yet most governors would not judge a turndown as great embarrassment, particularly in an era when presidential disaster declarations seem to be more freely issued and when a request may provide significant federal benefits to the state.

As mentioned earlier, once the president approves a governor's request for a declaration it is the job of FEMA, not the president, to actually determine how much money is to be allocated to states, counties, and other eligible entities under specified conditions (i.e., damage assessment), laws, and rules—all subject to audit by a variety of government offices. Political discretion exercised by the president is likely to be evident when the president approves gubernatorial requests on low-damage, marginal incidents, involving relatively low federal payouts. This means the relationship is an "inverse one." In other words, the lower the federal payouts are for various declarations, the higher the probability that political considerations at the presidential level played a role in a president's approval of a declaration.[108] Nonetheless, the federal government is not pushing disaster relief money out of planes. People must apply for it, must prove eligibility, must document their losses, must show that their

insurance is not duplicating federal disaster relief, and must submit to inspection and audit. State and local governments are expected to do even more than that in securing federal funds to repair infrastructure. State and local governments also must shoulder a share of the cost of rebuilding under many disaster declarations.

The "How Things Work" box paints a two-track picture of the dilemma of president-governor relations in the declaration process. The first track, in economic parlance, involves the issues of "ability to pay" and "willingness to pay." If a state is judged "able to pay (afford)" the costs of its disaster response and recovery costs, should the governor's request then be denied by the president with concurrence by FEMA? Here the grounds for a turndown may be that the state (and its disaster-impacted localities) has an ability to recover using their own resources but an unwillingness to pay these costs. However, structural problems may impede a state's ability to pay (i.e., state balanced budget requirements, inadequate rainy-day funds, restrictions on state borrowing, inability to raise taxes sufficiently quickly to pay for disaster costs). The second track entails matters of human need (beyond dollar costs), governmental compassion, and astute behavior by elected officials who desire a political and electoral future. The need-based, means-tested model explains declaration decision making in terms of rules and proven qualification, often in the interest of federal deficit control. The legislative theory model explains declaration decision making in terms of local and state lobbying. In this model representative politics geared to addressing important local needs with federal, rather than local, funding is apparent.

How Things Work: Two Competing Models of Political Behavior

Emergency management is best conducted on the local government level, although there must be some state involvement for the purpose of coordination across local jurisdictions.

To use economic language, in order to prevent disasters from having negative economic spillover effects in other places and to ensure that all state and local governments possess emergency management capability that is at least consistent with a national minimum standard, the federal government can promote state and local emergency management through grants dispensed after disasters and between disasters. Federal disaster policy aims to "sustain or restore a community's pre-disaster condition, not to alter the distribution of wealth."[109]

Consequently, the need-based, means-tested model applies in emergency management if local government pursues sustainability in its emergency management. Its disaster response and recovery funding is largely self-generated and it has no designs on exploiting national taxpayer money beyond the minimum needed to reestablish itself after a disaster or emergency. In turn, the national government must target its help so that it can keep disasters from producing unwanted, negative spillover effects in the regional or national economy but not drive up federal borrowing to pay for disaster relief. Also the federal government gains when research, technical advancement, disaster mitigation, and national standards development help authorities prevent disasters or minimize their future damage. This is a "need-based, means-tested"[110] model of presidential decision making.

The Legislative Theory Model

Another theory applied to emergency management holds that "emergency management is promulgated by actors who are elected or appointed in the context of a representative democracy, and thus these actors can be expected to respond to various pressures exerted by their constituents."[111] In short, this legislative theory model is characterized by "politically driven, distributive politics" in which elected local public officials are likely to respond to disasters not on the basis of whether or not their local government has the ability to respond and recover on their own but on the basis of demanding federal and state assistance to meet constituent needs. These officials want to be reelected and thus they wish to curry favor with their electorate by providing tangible benefits for which they can claim credit.[112]

Simultaneously, elected local and state officials attempt to shield their constituents from the costs of disaster response and recovery by funding these costs at the national level, which diffuses the fiscal burden over the largest possible population.[113]

Under legislative theory the national government inappropriately assumes local developmental responsibilities, often resulting in pork barrel spending and heavy encroachment into local response and recovery activities. Local government officials, meanwhile, tend to shape their behavior to conform to federal criteria in order to secure as many resources as possible.

Important politically subjective determinations come into play in the matter of "marginal" disasters. Marginal disasters are those events that are far less than catastrophic, that are not matters of national security, and that are near or within the response and recovery capacity of the state or states in which they occur.[119] Analysis of sixty years of presidential disaster declarations discloses that there have been hundreds of marginal disasters, some granted a presidential declaration and some turned down. Specific case examples indicate that there are definite losers in the competition for presidential declarations. For example, in 1980, Florida experienced flooding after a dam failure, and President Carter denied the Florida governor's request for a declaration. In the same year, he turned down two requests from Oklahoma within a two-week period for a declaration to cover devastation from severe storms and flooding. In April 2013, the city of West in Texas experienced a large and deadly explosion at a fertilizer plant. President Obama, having previously issued Texas an emergency declaration for the explosion, denied Governor Rick Perry's request for a major disaster declaration to cover uninsured or underinsured government disaster losses.[120] However, Governor Perry appealed the turndown and eventually the president, in consultation with FEMA officials, approved his appeal and issued Texas a major disaster declaration for the incident.

The record of approvals and turndowns raises questions about how gubernatorial requests for presidential declarations are considered, particularly for marginal disaster request denials and marginal disaster request approvals. For many years there have been no objective criteria governing approvals and turndowns, and as stated earlier, only the president who received the governor's request knows the basis upon which a request is approved or denied. Nor is it possible to ascertain statistically from government records whether or not fatalities played a role in a president's decision. FEMA does not keep records of fatalities and injuries sustained in declared disasters or emergencies.

Governors also play the game by seeking presidential declarations for drought, crop failures, minor wildfires, small floods, beach erosion, and a wide range of other calamities that cannot be considered catastrophes, major disasters, or emergencies under the "overwhelm" or "beyond the capability of the state/local government to adequately respond" condition.

Summary

"People look to the President for reassurance, a feeling that things will be all right, that the President will take care of his people."[121] This is an important management responsibility for presidents. As the nation has come to face increasing numbers, wider varieties, and often relatively larger scale disasters and emergencies, changes in law have given presidents more latitude in deciding what actually constitutes a disaster or emergency. Because the United States chose not to significantly limit presidential discretion in judging the deservedness of governors' requests, the system tolerates a degree of subjectivity, and sometimes political bias, in how presidents decide whether or not to approve or turn down any single gubernatorial request. Hence, some presidents have created new categories of disaster type. Moreover, the availability of the president's Disaster Relief Fund provides a pool of spending authority presidents may draw on to pay the federal costs of major disasters and emergencies they so declare.

A tolerated political dilemma continues. Presidents are accorded the freedom to disregard recommendations of FEMA in making decisions about whether to approve or deny governors' requests for presidential declarations of major disaster or emergency. United States disaster policy maintains that the president should not be restricted in using declaration authority to address calamities, some expected and others quite unforeseen, that the nation may face. Yet the president's freedom to decide what is and what is not a disaster or emergency invites subjectivity. Congress and taxpayers sometimes suspect that political motives and factors as well as the temptation to distribute various forms of federal largess occasionally draw presidents into issuing declarations to states for undeserving events. Some allege that governors sometimes ask for presidential declarations when their states and localities could respond to and recover from the "disaster" on their own. At times governors may exploit the political subjectivity of the system in a way that garners for their state more presidential declarations, and hence generous federal subsidization of costs associated with the calamity they face, than they actually deserve. Such undeserving calamites were defined as marginal disaster request approvals.

According to the need-based, means-tested model, presidential disaster declarations tend to reflect obvious need based on scales of damage, the degree of human suffering, and the inability of subnational governments to address the circumstances they face.[122] In other words, under this model the president's approval of governors' requests for declarations may be very much based on indisputable objective need first and foremost in almost every case. Catastrophic disasters invariably manifest the characteristics required for such approval: large-scale damage, immense human suffering, and the inability of subnational governments to address the need. Presidential political subjectivity in reviewing governors' requests for federal disaster relief is not in play when a state has experienced catastrophic disaster damage. However, catastrophic disasters still demand presidential management skills and responsiveness.

Homeland security law and policy has affected presidential authority and has expanded the range of presidential declaration issuance to include various events related to terrorism or terrorist threats, and it has subsumed many aspects of conventional declaration issuance for nonterror disasters under a broader rubric. The addition of catastrophic incidents formally signifies that some disasters have national security implications and the potential to damage the nation's economy. Presidents, advised by homeland security and federal emergency management officials, today have the power both to decide what a catastrophe is and to declare such events catastrophic incidents. The addition of the power to declare catastrophic incidents has expanded presidential discretion and has altered in some respects president-governor, federal-state relations.

For presidentially declared major disasters that are far less than catastrophic, particularly those that are on the margin of deservedness, and which often demonstrate statewide per capita damage totals that are less than the FEMA threshold for the respective state, the "politically driven, legislative theory" model applies. When presidents turn down specific gubernatorial requests for a declaration, the president is clearly opting to apply need-based, means-tested criteria. It is also reasonable to conclude that the need-based, means-tested model largely explains why some approvals take presidents and FEMA weeks or months to make a decision.

Clearly, news media coverage is highly important in the realm of disasters and emergencies, as is presidential

participation or coproduction in the making of disaster news. News media coverage of disasters has helped the politically driven legislative theory model to assume ascendancy at the expense of the need-based, means-tested model. In addition, each president's relationship with his or her top federal emergency manager is a factor in how that president handles emerging disaster circumstances and governor requests for federal assistance. Many previous top federal disaster managers owed their appointments to political spoils more than to qualified disaster management expertise. This helped advance the influence of legislative and electoral politics in presidential declaration decision making. Since enactment of PKEMRA of 2006, a law that required the president to nominate for FEMA administrator only candidates with previous emergency management experience, need-based, means-tested emergency management and disaster policy may be making a comeback.

Key Terms

Chapter 5 The Role of Scientists and Engineers

U.S. Soldiers and Airmen with the Oklahoma Army National Guard and the Oklahoma Air National Guard, along with Firefighters, Participate in Recovery Efforts after an Enhanced Fujita Scale 4–Strength Tornado, Measured as Two Miles Wide, moved through Moore, Oklahoma, on May 20, 2013. The Twister Injured 377 and Killed 25 People Including 8 Children Sheltering at their Schools. U.S. President Barack Obama Approved a Major Disaster Declaration Providing Federal Aid to Supplement State and Local Recovery Efforts and Later Visited the Area.

(Source: Photo by Sgt. 1st Class Kendall James/U.S. Department of Defense via Getty Images.)

PRACTITIONERS AND SCHOLARS STUDYING THE PHYSICAL AND SOCIAL DIMENSIONS OF HAZARDS AND DISASTERS have built and continue to build the foundations of the field of emergency management.

Disaster research is conducted by a broad array of experts. Scientific and engineering communities that focus on such research exist within all levels of government, in academia, and in the private sector.[1] Meteorologists and atmospheric researchers are assiduously examining weather phenomena, among them hurricanes, tornadoes, severe storms, and drought, as well as global climate change.[2] Flood phenomena are the focus of many dedicated geoscientists, engineers, meteorologists, land-use, and physical geography experts.[3] Biomedical researchers are hard at work tracking the spread of disease, striving to prevent pandemics, and testing and developing new vaccines,

some intended to protect people from bioterrorist attack.[4] Scholars researching social media are seeking to find more and better ways for emergency managers to make use of social media systems.[5] Researchers developing homeland security technology have made advances in high-speed computing and massive data storage, sophisticated computer software, facial recognition, and the use of satellite data and geographic information system (GIS) technology.[6]

This chapter covers scientific and engineering groups who study disaster and who are developing a body of theoretical and applied knowledge aimed at improved disaster prediction, mitigation, prevention, preparedness, response, and recovery. Additionally, the chapter includes discussions of how science and engineering informs and shapes disaster policy and politics.

Researching Hazards and Disasters

Spurred on by intellectual and technological advances over the twentieth century, federal emergency management grew as an intellectual, scientific, and engineering enterprise. By the 1980s and 1990s, great advances in hazards research—most particularly in meteorology, seismology, and physical geography but also in the building sciences, climate change research, and environmental science—gave credibility to disaster research.[7] The twenty-first century has thus far dramatically accelerated the pace of scientific and technological advancement.

The National Academies—made up of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, facilitated by their National Research Council—conduct numerous disaster-related research studies for various sponsors, among them federal agencies that contract with them to form panels and conduct studies.[8] The research reports of the National Academies have been known to greatly influence makers of public policy who are struggling to find solutions or policy approaches to the complex problems they must address. For example, in 2002 the National Research Council published a report that addressed how science and technology could help the nation facilitate counterterrorism work.[9] Two years earlier the council published a study on risk analysis and flood damage reduction.[10]

In 2000 the National Academies formed the Disaster Roundtable, a body led by a group of experts from academia, scientific professional societies, federal scientific research agencies, and private industry. The quarterly disaster-related workshops sponsored by the Disaster Roundtable bring together many of the top authorities in the world. In some respects these workshops represent a peak association of disaster-interested science and engineering experts.

After the 9/11 attacks, the National Laboratories of the U.S. Department of Energy (DOE) began to dedicate more of their research endeavors to examining disaster threats posed by terrorism. The National Laboratories owe their origin largely to the Manhattan Project of World War II. Today they comprise an expansive system of research facilities in which university, government, and private sector scientists and engineers grapple with basic and applied research endeavors, many intended to address defense, security, and other societal needs.[11] The Homeland Security Act of 2002 transferred a portion of DOE laboratory research expertise to the new U.S. Department of Homeland Security (DHS).

The intellectual and technological advances achieved over the past thirty years gave rise to a disaster services business sector composed of consultants, contractors, for-profit businesses, and nonprofit organizations. Many business executives recognized the importance of maintaining business continuity before, during, and after disasters. Some types of businesses recognized their increased importance in periods of disaster. Home Depot, Lowe's, and other hardware and building supply firms created an ability to scale up their operations at times of need in areas where their stores could be used to help their customers prepare for impending hurricanes or tropical storms. In the same respect, these and many other businesses able to survive disasters often donate many of their critically needed wares to disaster victims at no charge. Major store chains, franchise businesses, and other firms improved their capacity to help the owners and managers of disaster-ravaged firms in their respective networks reestablish themselves.

The 9/11 attacks impelled American policymakers to support private sector and government contractor research on new types of counterterrorism technologies. Vast sums of federal funding went to firms producing vaccines that would be needed in the event of various types of bioterrorism attacks. The need to improve port security and interdict shipments of cargo hiding weapons of mass destruction impelled policymakers to fund both conventional and exotic lines of screening devices. Aviation and airport security was another top post–9/11 policy priority. Major firms won federal contracts to x-ray baggage, to detect explosives being carried by passengers, to set forth massive computer databases that could be used to verify the identities of air travelers, to check passengers against "watch lists," and to match every item of a plane's checked luggage to an actual passenger on that plane.

The threat of terrorism inside the United States also induced Presidents Clinton, George W. Bush, and Barack

Obama as well as Congress to support and fund new types of security research and technologies. Data mining, improved intelligence collection via analysis of Internet traffic and transmissions, improved surveillance technologies, new forms of bomb disposal and explosives monitoring, computer-assisted visual identification technologies, X-ray and electromagnetic resonance technology to examine the contents of containers shipped through airports and seaports, technologies used in hardline and wireless telecommunications, and other innovations all gave rise to a securitization of the field of emergency management. For our purposes, securitization means that authorities take extraordinary measures in national security, defense, and intelligence gathering on account of real or perceived threats. Some of these measures may preempt existing laws or treaty agreements on grounds that national survival is at stake.[12]

The anthrax attacks in the fall of 2001 motivated policymakers to dedicate vast resources to counter the chemical or biologic weapons that terrorists might use to contaminate, poison, or destroy food, water, medicines, and even the air we breathe. Since 2001 and as recently as May 2013, a succession of mailed ricin letter attacks on the president and other elected officials, though few were proven to be committed by foreign terrorists, have impelled authorities to ask people for increased vigilance just as those authorities have continued monitoring mail flows through postal facilities.

Disaster Researchers Compete for Government Funding

Disaster research serves emergency management but also generates funding needs policymakers are asked to address. To pursue many lines of disaster study, researchers need expensive technical equipment. Special types of military aircraft are needed to fly through hurricanes and tropical storms; uniquely outfitted ships must be used to deploy and maintain arrays of high-technology ocean buoys arranged in a network latticed over many thousands of square miles of sea—all this to monitor changes in water temperatures, ocean currents, and ocean water chemistry critical in measuring or detecting climate change and global warming; high-speed computing technology is needed to process and store prodigious information flows to thwart possible plots and attacks on the nation; coastal research aircraft missions fly parallel to the nation's coastlines so their onboard LIDAR (specialized side-looking radar technology) can provide hyperaccurate maps of how far and where storm surges may penetrate inland. And there are many other technical needs as well. Universities must secure funding to research methods of structural reinforcement against seismic shaking, often using giant and costly shake-beds supporting three-story-tall mock buildings. Research organizations analyzing wildland fire behavior must become ever more proficient in advising the U.S. Forest Service and many other firefighting organizations about the direction a fire is heading, how surface contours will affect the path and intensity of the fire, what aerial and satellite images reveal about the magnitude of the fire and the progress of suppression efforts, what natural vegetative fuels lie just ahead of the fire, and more—all for the benefit, knowledge, and safety of those in the field fighting the advance of the fire.

Securing budget authority to pay for these needs requires many disaster researchers to enter the world of lobbying government. Thus, owing to the need for government funding to pay for expensive research equipment and facilities, some domains of disaster research engage what has been referred to as "big science."[13] The world of big science has its own politics and policy.[14] Indeed, many segments of the nation's academic community, often in cooperation with scholars outside the United States, have received government support for their research through federal agencies such as the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), the U.S. Geological Survey (USGS), the National Institute of Standards and Technology (NIST), the U.S. Army Corps of Engineers (USACE), the National Aeronautics and Space Administration (NASA), the DHS, the Federal Emergency Management Agency (FEMA), and more.[15]

Additionally, the National Science Foundation (NSF) funds a great variety of academic research endeavors, a portion pertinent to disaster studies.[16] Many private foundations either subsidize disaster study or pursue this research using their own experts in-house. The Rockefeller Foundation has launched a program that will sponsor municipal positions in some thirty cities intended to advance local resilience in the face of future disaster threats. The Robert Wood Johnson Foundation and the Howard Hughes Medical Institute both support cutting-edge health research important in disease control, pandemic response, and emergency medicine. The Bill & Melinda Gates Foundation is famously seeking to eradicate childhood diseases often associated with the human strife of disasters and complex humanitarian emergencies.

Major corporations, including giant utility companies, and insurance firms routinely pursue research that investigates natural forces, hazards, and disasters. Twigg reminds us that in disaster circumstances private corporative behavior may be classified over five categories:

- philanthropic/charitable (money and in-kind assistance donations)
- contractual (providing goods and services under terms of an agreement of some sort)
- collaborative (extending cooperation; advice; help to governments; nonprofits; or other entities via services supplied, donated paid labor, loaned expertise, etc.)
- unilateral (internal response and assistance, perhaps to arms or divisions of the firm itself, to its franchisees, affiliates, associated partners, etc.)
- adversarial (resistance to public responders, objections to post-disaster regulatory changes, indifference or insensitivity to the community's or labor's post-disaster strife, etc.)[17]

Social Sciences and Emergency Management

Besides engineers and natural scientists, there are social scientists who research disaster phenomena and work inside many of the previously mentioned organizations.[18] Disaster sociologists, political scientists, economists, social geographers, demographers, social psychologists, and urban planners, to name a few, have made major contributions to the study of hazards and disasters.[19] The disaster sociology community laid the foundations for much of the field of emergency management as we know it today.[20]

The social sciences play a key role in helping emergency managers understand human behavior and the phenomena of disaster. Disaster sociologists have produced a massive body of scholarship and research results about the community-level disaster experience. They have helped identify common misconceptions (myths) about how people behave in disasters.[21] Moreover, by taking into account cultural, age, ethnic, racial, and gender factors, they have helped explain human behavior before, during, and after disasters.[22] Social science researchers have also explored such questions as to whether human-made disasters are becoming indistinguishable from "natural disasters" and whether both types of disaster are being made worse by tolerated and growing disaster vulnerability.

Most Americans believe they understand risks and many believe they are behaving prudently in the face of risk.[23] However, according to disaster sociologist Dennis Mileti, everyone he's interviewed "always thinks they are safe."[24] It is only human for a person to assume that disasters happen to other people, never to them. Unsurprisingly, many Americans fail to anticipate or prepare for the possibility of disaster. Research analysis, some of which is conducted in the field at or near disaster sites, has been the stock-in-trade of the University of Colorado Hazards Research Center and the University of Delaware (UD) Disaster Research Center for decades.[25]

Social scientists who focus on disaster research appreciate that "policy makers have sought ideas to improve the nation's preparedness for and response to natural and other types of disaster," and they understand that the products of their work carry the potential to influence public policy in ways that may diminish disaster vulnerability and promote hazard mitigation and preparedness.[26] The NSF has supported the social science research community "to pursue a long term program of research on hazards and disasters, to train cohorts of graduate students, and to pursue strategies to disseminate knowledge."[27]

Social scientists working in academic settings have often been able to examine controversial dimensions of disaster study. For example, several social scientists have argued that Hurricane Katrina was actually a social catastrophe in which deeper forces of structural racism and social inequality caused the poor andpeople of color to suffer disproportionately.[28] Some social scientists contend that there is no such thing as a "natural disaster" but only a natural event for which humans have inadequately prepared.[29] This is a strong assertion intended to convey a lesson. Moreover, social scientists posit that disasters are very much defined as types of extraordinary social events experienced by people and often in a variety of ways.

Social scientists have helped the field of emergency management as well. They have demonstrated that human-caused disasters and natural disasters logically require an all-hazards emergency management approach. Social scientists sometimes explore the political interests and legal issues associated with each type of disaster. In this respect, philosophers would hold that volition is important. A common assumption is that most people who experience natural disasters are innocent victims. These victims did not freely choose to put their lives and their loved ones' lives at risk. They were unfortunate victims of circumstance. However, both natural and human-caused disasters often involve some form or degree of culpability on the part of some party or parties, and they sometimes involve the assumption of voluntary risk by people who may become victims. Did those who chose to build homes on the periphery of known, fire-vulnerable dry-brush-covered or chaparral areas in California, Arizona, Colorado, New Mexico, and other locations knowingly assume a disaster risk before the destructive wildland fires over the years 2003 to 2013? Did those who reside in homes or residential complexes located in river floodplains or near very low-lying coastal shorelines freely elect to assume higher flood risk? Are people ever

actually aware of their proximity to hazards? Would information supplied to them regarding their individual probabilistic hazard risk ever be enough to convince them to reside in a so-called "safer" location? Disaster sociologists remind us that there is a tendency to "blame the victim" for disaster calamities. Yet disaster researchers fully appreciate that human settlement patterns, commercial and government building decisions and infrastructure construction, and known geophysical and meteorological phenomena often combine to create a realm of tolerated disaster vulnerabilities.

In 2006 a committee of the National Research Council of the National Academies published a major report on how over the past twenty-five years the social sciences have contributed to disaster research. Below is a short summary of its major findings.

- The origins, dynamics, and impacts of hazards and disasters [have] become much more prominent in mainstream as well as specialty research interests throughout the social sciences.
- Traditional social science investigations of post-disaster responses [have become] more integrated with no less essential studies of hazard vulnerability, hazard mitigation, disaster preparedness, and post-disaster recovery.
- Disciplinary studies of the five core topics [hazard vulnerability, hazard mitigation, disaster preparedness, emergency response, and disaster recovery] within the social sciences [have] increasingly become complemented by interdisciplinary collaborations among social scientists themselves and between social scientists and their colleagues in the natural sciences and engineering.
- There is continuing attention throughout the hazards and disaster research community on resolving interdisciplinary issues of data standardization, data management and archiving, and data sharing.
- There is continuing attention throughout hazards and disaster research on the dissemination of research findings and assessments by social scientists of their impacts on hazards and disaster management practices at local, regional, and national levels.
- Each generation of hazards and disaster researchers makes every effort to recruit and train the next generation.
- The funding of hazards and disaster research by social scientists, natural scientists, and engineers is a cooperative effort involving the NSF, its partner agencies within the National Earthquake Hazards Reduction Program (NEHRP), the DHS, and other government stakeholders.[30]

The Science Informing the Policy and Politics of Disasters

Science and engineering play integral roles in mitigation, preparedness, response, and recovery. Although FEMA has many scientists and engineers, there are far more in other federal agencies whose jobs involve disaster in some form. The examples and cases that are presented within the discussions of each of the four phase categories demonstrate the importance of science and engineering in disaster policy and politics.

Mitigation

Since the 1970s, emergency managers have sought to abate disaster loss, or prevent a disaster or emergency altogether, by identifying and attempting to reduce hazard risks and vulnerabilities capable of producing disasters or emergencies. This is known as mitigation and is seen by many as the cornerstone of emergency management. Mitigation involves "keeping homes away from floodplains, engineering bridges to withstand earthquakes, creating and enforcing effective building codes to protect property from hurricanes."[31] There are small armies of geoscientists and engineers across the nation and the world who are dedicating their expertise to the study of seismic events. Similarly the U.S. Forest Service invests sizable efforts in researching wildland and other types of fire disasters. Such research leads to programs and plans for mitigation and informs policy.

From its origin to the present, FEMA has made great strides in examining the practice of, and in performing, disaster loss estimation.[32] The FEMA Federal Insurance Administration (FEMA-FIA) manages the National Flood Insurance Program (NFIP), established by Congress in 1968. The administration'sUnified Program for Floodplain Management laid out national goals and set strategies to shrink losses and to protect natural resources.[33] For property owners to qualify for NFIP low-cost flood insurance, their respective local government has to agree to participate in the program and abide by its rules, which includes instituting laws and ordinances to discourage unsafe construction in flood zones. Homeowners whose domiciles were subject to recurring flood loss sometimes petitioned FEMA to buy their properties or relocate them (at government expense) to safer locations. The subsequent era of FEMA residential home buyouts may have had its origins in assistance provided to those displaced by the Love Canal, in Niagara Falls, New York, hazardous waste incident and later to the relocation undertaken in the small Missouri community of Times Beach, which was affected by dioxin contamination and subsequently relocated using FEMA funds.[34]

The NFIP, mentioned in other chapters, is noteworthy here because the success of the program rests very much on the ability of FEMA-FIA officials to analyze the science and geography of flood risk. NFIP is in the business of calculating flood risk information and factoring findings into actuarial calculations that determine rates to be charged to those who seek to buy NFIP insurance on their homes and businesses. The basis of the NFIP program is to advance flood disaster mitigation through encouraging local governments to engage in sound land-use practices and in pressing NFIP buyers through the instrument of insurance to do the same thing.

Disaster mitigation has assumed increasing and enduring importance in emergency management across all levels of government. Disaster mitigation is recognized as important "between disaster" emergency management work. Emergency management officials continue to stress that disaster mitigation or prevention is everyone's responsibility. An important element in disaster mitigation is to motivate Americans to engage in disaster prevention activity in their homes, schools, and workplaces. In many ways, the diffusion of disaster mitigation knowledge has done much to advance public awareness of emergency management and catalyze public action. Nevertheless, it sometimes takes many years before the public and responsible authorities understand and act on the findings and recommendations of disaster's scientific and engineering experts.

Preparedness

Preparedness involves anticipating and developing a variety of resources for response and recovery.[35] For emergency managers at the local level, a preparedness strategy "is the mechanism by which the community builds its capacity to respond" to an emergency or disaster.[36] A preparedness strategy involves tactical planning in which plans and procedures are developed to support the strategy; logistics management, which examines resources needed, resources available, shelter planning, and how resource shortages will be addressed; and training of personnel.[37] Preparedness identifies key functions to be performed after a disaster. Preparedness also involves warning systems and pre-disaster actions taken to promote safety and facilitate community disaster response.[38] For example, flood forecasting and warning has saved many lives in the United States and elsewhere. Flood modeling achieved high levels of accuracy for heavy rainfall and flood flows.[39] Real-time stream gage data can also be used to track water levels as it moves downstream through a watershed. This may slash damage costs by up to one-third on the floodplains of larger rivers.[40] This only helps when the communication piece is synchronized with the forecasted information. If there is breakdown in the dissemination of vital information to decision makers, then this method fails. Homeland security officials have long advocated that "prevention" be added to the four-phased disaster cycle of mitigation, preparedness, response, and recovery. The prevention example embodies, though focused on interdiction, features of preparedness, mitigation, and response. It will be presented here for its preparedness relevance for an oil spill. See the "History's Lessons" box.

Response

Science and engineering play a major role in disaster response. Consider the example of firefighting. Because fires are a constant threat to homes, businesses, farms, and other structures, it has become a customary public safety and emergency management obligation of local governments. They must establish and provide for local fire services able to respond quickly and capably. The local emergency manager in cooperation with the fire department officials develops emergency response plans, and firefighters must be trained to carry out these plans so as to save lives and reduce damage.[41] They must respond to both routine emergencies and major disasters.[42] First-responder units, such as firefighters, emergency rescue, hazardous materials teams, and emergency medical technicians must have various kinds of specialized education and training to do their work.[55] Training shows new recruits what is expected of them, and training allows for the creation of unified teams. Firefighters must be trained and educated to grasp the problems they confront, to operate or handle equipment, to work in groups, and to help serve their community. Fire service people also work to educate the public on matters of fire safety and prevention.

History's Lessons: Fighting and Preparing to Fight Great Oil Spills as a Marine and Environmental Science Challenge[43]

Oil spills are a fact of life. "How damaging an oil spill is depends in part on the degree of emergency preparedness in place before the event, the speed of response, and the effectiveness of recovery operations once a spill has occurred."[44]

On April 20, 2010, about twenty-one years after the *Exxon Valdez* oil spill disaster into Prince William Sound, Alaska, the 5,000-foot-deep Macondo Mississippi Canyon Block 252 well erupted after a blowout caused a catastrophic explosion and fire aboard the British Petroleum (BP) PLC-leased Deepwater Horizon offshore oil-drilling platform. The platform was owned by Transocean Ltd. and located about forty miles (sixty-four kilometers) southeast of the Louisiana coast in the Gulf of Mexico. Eleven platform workers were killed, and seventeen others were injured when the Deepwater Horizon exploded. Owing to the explosion and ensuing conflagration, the entire platform sank to the bottom of the sea two days later. A damaged wellhead on the sea floor, which had been truncated by the failure of the platform, plus the malfunction of the blow-out prevention system, opened a path for discharge of crude oil at rates of up to 9,000 barrels (798,000 gallons) a day into the Gulf of Mexico, according to federal estimates.[45]

The environmental damage caused by the 2010 BP Deepwater Horizon oil spill was reported to have severely affected the intricate and sensitive ecosystems of the region. The fragmented, far-flung oil slick washed ashore befouling the marshes of Louisiana to the beaches of Florida, coating plants, killing wildlife, and threatening wetlands. Hundreds of birds, turtles, and dolphins were found dead in regions affected by the oil,[46] and brown pelicans and other species remain covered in oil that gathers in pools.[47]

While hundreds of species of animals and plants were at risk, the wildlife death toll remained relatively modest since most of the oil remained in the open sea. However, Louisiana, which had lost large swaths of coastal wetlands in recent decades, suffered as the oil imperiled marsh cane and other plants that hold the marshes together. If the plants' roots survived, the plants might overcome the effects of the oil spill. However, the sieve-like marshes are vulnerable to oil damage and should they die, long-term ecological viability would be threatened, the water would become deeper, and coastal communities would have less of a buffer against hurricanes, increasing the amount of potential inland surge.[48]

How to Manage Cleanup and Bioremediation?

The great concentration of oil platforms along the middle and western Gulf Coast convinced corporate and government authorities to prepare for possible oil spill cleanups. But few anticipated a three-month discharge of oil at prodigious rates from a mile beneath the surface. Government planning for response and cleanup entrusted much to the corporate spiller, just as in the 1989 *Exxon Valdez* incident. Government in 1989 had limited expertise in supervising a massive oil spill in a remote and environmentally sensitive location. Governments in 2010 had little expertise to reason out how to halt to a sea floor laceration discharging oil at daily rates that exceeded those of many oil producing U.S. states.

Oil spill cleanup technology continues to advance albeit slowly, but selecting the most appropriate technology remains a problem. There are a variety of mechanical recovery techniques. How successful any technique is depends on atmospheric and sea conditions, the character of the oil spilled, the quantity of the oil spilled, the location of the spill, and other factors. On-scene coordinators need to know in advance which techniques to apply, and they need to act quickly.[49]

A continuing controversy surrounds the twin problems of environmental damage assessment and methods of bioremediation for oil-damaged resources. Bioremediation is the treatment of pollutants, waste products, or contaminants by the use of microorganisms (such as bacteria) that break down the undesirable substances and which help restore natural areas and habitats. Studies of the long-term impact of major oil spills on the water column and the food chain were needed after the *Exxon Valdez* disaster. Such studies would undoubtedly be time-consuming, expensive, and perhaps subject to challenge. However, true damage assessment could not be achieved in the absence of such studies. Also, prescriptions for appropriate bioremediation approaches cannot be reasonably put forward without a good scientific foundation.[50] The question is whether environmental assessment and environmental bioremediation have advanced far enough since 1989 to encompass and address the full range and scope of problems presented by the Deepwater Horizon oil spill catastrophe.

Moreover, questions and reservations pertaining to use of dispersants (in oil spills to the sea) continue to plague the oil spill cleanup regulatory community. Dispersion is the tendency of crude oil to break up into droplets within water. This increases the surface area and allows further dissolution and evaporation of the light end of the hydrocarbons.[51] It is possible to spray various chemicals over an oil slick in order to promote this process.

However, many chemical dispersants and the dispersed oil itself contain toxins damaging to organisms and the food web. This makes dispersant use environmentally controversial. Many private oil industry and transport officials believe dispersants can be used effectively, and many even maintain a quantity of dispersant at their facilities.[52] Until the Deepwater Horizon oil spill, wholesale use of dispersants was rarely approved by U.S. authorities in the aftermath of oil spills.

Nonetheless, the scale and magnitude of damage produced by the massive discharge of oil from the sea floor in the BP Deepwater Horizon case produced an air of desperation both on the part of industry and on the part of government. BP engaged in huge dispersant spraying activities and with a type of dispersant not fully authorized by the EPA.[53] Moreover, BP not only massively sprayed the sea surface but, with federal approval, also engaged in injecting dispersant directly into the oil and gas stream from the sea floor, something never attempted before.

The Obama administration demanded that BP use more environmentally friendly dispersants to break up oil slicks since most dispersants pollute the entire water column and allow the toxic chemicals to remain dissolved in the water where they kill planktonic species and pass across gills and into digestive systems (since the dispersants prevent toxic chemicals from evaporating). The dispersant used by BP, Corexit 9500, is currently banned in British waters and poses risks to cleanup workers.[54]

It is ironic that some twenty-one years after the *Exxon Valdez* oil spill, controversy reemerged over where, when, which type, and how much dispersant to use on the spill. However, in the *Exxon Valdez* case, U.S. authorities ruled against using dispersant, owing to negative environmental effects as well as to the condition of the spill at the time. Scientific research has yet to draw conclusions about the massive surface and sub-surface use of oil dispersants in the BP spill case.

Selecting appropriate oil skimming devices and technologies, a job entrusted to the U.S. Coast Guard, was a challenge in both spills. In both spills proposals were made to burn surface oils, and in both cases these actions were deemed ineffective. More worrisome are ongoing disputes about proper use of oil dispersants from 1989 to and through 2010. Has marine and environmental science prepared us for what we need to do to combat major oil spill environmental damage likely to occur in the future?

Over the years national policymakers in Congress have enacted laws, established organizations, and created programs that have facilitated local and state emergency response to fire disasters. The U.S. Fire Administration (USFA), the National Fire Academy, FIRE grant programs, and the First Responder Initiative are key components of the federal contribution to the fire services. The USFA was developed out of the former Fire Prevention and Control Administration of 1974 and is now a part of FEMA.[56] "The mission of the USFA is to reduce life and economic losses caused by fire and related emergencies, through leadership, advocacy, coordination, and support."[57] Through public education, training, technology, and data initiatives, the USFA hopes fire calls will decline and that improved firefighting response operations will cut fire damage over time.

The USFA provides training to fire service personnel on a national level. By augmenting existing state and local fire service training programs, it hopes to improve and maintain high fire company standards of capacity and performance across the nation. Also, the USFA helps develop the technology that fire services must obtain to help them promote fire prevention and to improve response. The USFA assists state and local groups in collecting and interpreting data on fires in their respective areas; using this information, USFA scientists and researchers develop customized solutions and programs tailored to the needs of the community. This work promotes a partnership between people at the community level and their local fire service people.[58]

The USFA director reports directly to the FEMA director. The USFA conducts hazardous materials training courses for emergency responders at its National Fire Academy, in Emmitsburg, Maryland.[59] The National Fire Academy provides firefighters sophisticated education and training, all intended to improve their expertise as emergency responders.[60]

Since early 2001, Fire Investment and Response Enhancement (FIRE) grants have been awarded to local fire departments for equipment, protective gear, training, and prevention programs. This congressionally approved FEMA program provided $100 million in small grants in its first year. By 2002 that amount had risen to $300 million, and in 2006 FEMA provided over $1.8 billion to U.S. local fire services.[61] Funding for the program has declined since 2006. FIRE grants may be used to hire or train personnel, buy more equipment, or develop prevention plans, all aimed at improving response.[62] Besides this, the Staffing for Adequate Fire and Emergency Response (SAFER) federal grant program went into effect in late 2003, and this also advances local disaster preparedness.[63]

The importance of adequate fire department staffing has been well documented by independent studies. The National Fire Protection Association (NFPA), the consensus standards-making body of the fire service, and the Occupational Safety and Health Administration (OSHA) have both promulgated standards for the minimum number of firefighters needed to respond safely and effectively to emergencies. The number of jurisdictions meeting these safe staffing levels has plummeted in recent years due to the recession. SAFER grants are crucial to helping fire departments hire sufficient firefighters to meet safe staffing levels.

Similarly, the FIRE grant program allows fire departments to purchase equipment and receive training that such departments could not otherwise afford. Equipment and training funded by the FIRE grant program help firefighters do their jobs safely and successfully by improving the effectiveness of fire department operations and protecting the health and safety of local firefighters.

Although FIRE and SAFER grants had been traditionally well funded, congressional efforts to reduce the deficit have caused a reduction in funding for SAFER and FIRE in recent fiscal years. For fiscal years 2010 and 2011, the programs were funded for a total of $810 million. For fiscal years 2012 and 2013, however, funding for the two programs was reduced to $675 million—$337.5 million each. Unfortunately, the weak economy has also led communities nationwide to reduce fire department staffing and cut back on training and equipment purchases. Combined, such cuts at both the national and local level undermine emergency response and pose significant threats to public safety and local preparedness.

> For fiscal years 2009–2013, in response to the recession, Congress enacted waivers to SAFER allowing local governments to use the grant to retain or rehire firefighters. They also waived a number of budgetary requirements, including requirements to maintain the fire department's budget, funding caps and local matching requirements. Congress must extend these waivers for fiscal year 2014 to ensure they continue operating as intended.[64]

The Assistance to Firefighters Grant Program promotes mitigation and preparedness in fire departments across the United States. The Assistance to Firefighters Grant Program, like the FIRE grants program, provides assistance to fire companies at state or local levels, enabling them to identify and obtain the necessary public safety resources. These one-year grants go directly to fire departments.[65] It is through programs and organizations such as the

USFA, FIRE grants, and the Assistance to Firefighters Grant Program that state and local fire services are better able to respond to disasters or emergencies.

> The primary goal of the Assistance to Firefighters Grants (AFG) is to meet the firefighting and emergency response needs of fire departments and nonaffiliated emergency medical service organizations. Since 2001, AFG has helped firefighters and other first responders to obtain critically needed equipment, protective gear, emergency vehicles, training and other resources needed to protect the public and emergency personnel from fire and related hazards.[66]

Federal fire programs make a significant contribution in national preparedness and response to terrorism. Congress and DHS understand that firefighters will be called first once a terrorist attack occurs, and they must be ready. As much as $3.5 billion to $4 billion a year in federal spending has been devoted to the first responder community. Fire grants, as well as Urban Area Security Initiative funding, has gone toward equipping and training first responders to prepare for various forms of terrorist attack.[67]

The Medical Sciences and Disaster Response

Biological and chemical warfare has been a reality for years. In 1988 Saddam Hussein ordered the use of chemical weapons against Iraqi Kurds—5,000 people were killed in that attack. In March 1995, members of the Aum Shinrikyo cult, using sarin nerve gas, launched an attack on five different cars of three different subway lines in Tokyo. Twelve were killed, 50 were injured, and some 5,000 people experienced temporary vision problems. The United States had considerable experience dealing with hazardous materials incidents and chemical contamination from abandoned hazardous wastes well before 2001. However, the anthrax- or ricin-laced letter attacks of fall 2001, coming only weeks after the 9/11 terrorist attacks, deeply alarmed Americans and their elected representatives. The prospect of terrorist biological and chemical attacks inside the United States was becoming a reality.

At that time one expert said the United States was unprepared to respond to a chemical or biological attack at the state and local levels because the U.S. public health infrastructure had been "decimated" over the previous two decades. The public health community helps track the incidence of disease, maintains records of morbidity and mortality, helps combat the outbreak of epidemics, monitors the adequacy of local health services, and promotes food and drug safety. The anthrax incident in 2001 helped move public health to the top of the federal policy agenda for a time. In the years after 2001, the federal government, aided by state and local governments, went on to vastly rejuvenate the nation's system of public health services.[68]

As mentioned, the U.S. Public Health Service and a variety of other federal health response agencies enjoyed a major and sustained infusion of federal funding in the long-term aftermath of the anthrax attacks of 2001. This has helped overhaul the nation's public health system. The federal government scaled up its capacity to address bioterrorism in spectacular and expensive ways. Project BioShield, launched in 2004, is a major example. Nevertheless, it remains to be determined how adequate our response would be in a future biological or chemical attack.

America's system of hospital mass emergency care after deadly and injurious events continues to improve every year, though unevenly and sometimes erratically. The Boston Marathon terror bombing on Massachusett's Patriot's Day in April 2013, revealed how advantageous use of social media and extraordinary pre-hospital and hospital medical care made a lifesaving difference for many victims of the tragedy (see the "How Things Work" box).

How Things Work: The Boston Marathon Bombing, Social Media, and Mass Casualty Preparation (2013)[69]

No recent example of social media use during an event is as compelling as that of the Boston Marathon bombing in 2013. The Boston Police Department (BPD), which already had embraced social media use, had trained their deputies on how to use Twitter as part of their daily activities. In spite of the firestorm of information about the victims, the bombing investigation, and the suspects that was filling the universe of Twitter, the police department drew the help of a great many people who were paying attention to the event through social media. The police did so in a way that advanced their search for the perpetrators.

As events unfolded, BPD used Twitter to keep the public informed about reports of additional bombing sites, fires around the city, and street shutdowns. The hospital spokespeople informed the public about the number of surgeries and type of cases they were dealing with. This helped meet the incessant public demands for details about victims. As the initial shock of the bombing began to subside, information about possible suspects surfaced. However, more was misinformation than potentially valid leads. BPD quickly mounted rumor control and effectively corrected the misinformation. In an uncharacteristic move, BPD even posted surveillance photos of suspects, which had also been submitted via social media to the department. This was done to ask for the public's help in identification.[70] The broadcast news stations even reported a suspect in custody and in transit to be arraigned. BPD picked up this report and quickly issued a tweet indicating that no suspects were in custody and no one was being transported to the court-house. In less than thirty seconds, the footage following a vehicle through the streets of Boston was interrupted and went to commercial and the scrolling banner on all twenty-four-hour news channels removed the misinformation about the suspect in custody.

No matter how prepared Boston was for an emergency during one of their large events, technology failures during the response posed serious problems, particularly for hospitals. While many patients were being delivered to the various emergency rooms, there was no way to identify unconscious patients that arrived without identification or a family member or friend. Since all hospital systems relied on a patient being enrolled through the standard admission process, it became nearly impossible for them to identify and track critical patients that arrived in the emergency room and trauma centers. These patients clearly needed immediate help and there was no time to formally admit or register these patients.

By using a series of six-digit numbers to identify patients, confusion ensued, and it was difficult to keep track of numbers and relate test results and imaging back to the right patient. It was also difficult to go back into the "system" and enter actual identification information once the patient was correctly identified. Moreover, financial and billing data is generated from electronic records physically attached to patients usually as ID badges. The patient identification confusion resulted in supplies and medications that were used but never properly billed. In larger events, this technology shortcoming could cost hospitals and physicians great sums, failed reimbursements, and might potentially trigger malpractice lawsuits. The trauma centers in Boston have published these findings in hopes that other hospitals can be better prepared from a technology standpoint to deal with mass casualty incidents.[71]

Recovery

Disaster recovery is often the most expensive and most protracted phase of the disaster cycle. Science and engineering issues permeate a vast array of disaster recovery issues. For example, a major environmental health issue surrounds disaster recovery for those affected by Hurricane Katrina. Flooded areas, especially in and around New Orleans, created toxic or viral collections of mold and mildew. As after many floods, owners of flooded structures face the often daunting task of identifying all the areas of contamination. Those who seek to repair flooded structures must take care not to ignore the environmental health threats posed by mold and other contaminants.

Disaster recovery involves a host of other scientific and engineering problems emergency managers and policymakers can ill afford to ignore. From April to October 1993, the great Midwest flood covered nine states, ranging over the Mississippi and Missouri river basins. Each state suffered enough flood damage to warrant presidential declarations of major disaster. At one point every county in the state of Iowa was covered under a presidential declaration of major disaster owing to flooding. Direct federal assistance for all nine states exceeded $4.2 billion, plus an additional $621 million in disaster loans to individuals and businesses.[72] Estimates of the total damage ran as high as $16 billion. Only about one in ten structures affected by the flood were covered by national flood insurance policies.[73]

FEMA was widely praised for its handling of the flood response. The disaster was one of the first major challenges of Clinton's revamped FEMA. Director Witt made sure FEMA people proactively addressed the disaster under his new policy of no longer waiting for states to ask for damage assessment teams. Before the flooding became a major disaster, Witt sent out FEMA regional staffs to help states apply for disaster assistance. In the Midwest flood disaster, FEMA responded quickly to requests from states and anticipated requests. FEMA handling of the Midwest floods won praise from both Republicans and Democrats in the Senate and House.[74] Still, the Midwest floods were predicted by weather forecasters almost twelve weeks in advance, thus giving Witt and FEMA considerable time to consult with governors and to mobilize federal response people and assets before the flooding climaxed.

Chapter 2 briefly examined the FEMA-encouraged National Disaster Recovery Framework (NDRF). A key finding of that review is that communities of stakeholders are today in many localities planning their disaster recoveries far in advance of the disasters that may someday befall them.

Case Studies of Science and Engineering Applied to Disaster

Disaster policy and politics are embedded in many realms of scientific and engineering research. Next are a series of examples. These are presented outside this chapter's mitigation, preparedness, response, and recovery framework.

The first case demonstrates that earthquake engineering research and seismological study have long been core concerns of both U.S. and Japan disaster policy and emergency management. The steady and major decline in fatalities from earthquake in the United States over the last half century is in part a credit to significant public and private investment in the building sciences, better engineered structures, improved seismic building codes, and earthquake retrofitting of homes and businesses. Japan's experience with its March 11, 2011, earthquake and tsunami provide an amazing account of how advances in science, engineering, and telecommunications have contributed to the challenge of earthquake preparedness, warning, and alert. This is the opening case examined.

History's Lessons: Northeast Japan's Great Tsunami and the Fukushima Daiichi Nuclear Power Plant as a Compound Disaster (2011)[75]

The Japan Meteorological Agency (JMA) leads that nation's mitigation and prevention of natural hazards, particularly those capable of catastrophic consequences. This office is within the Ministry of Land, Infrastructure, and Transport and part of the Courts branch of government. The JMA shoulders duties similar to those carried out by at least three different U.S. government agency counterparts. It is responsible for tracking all weather-related phenomena as well as monitoring, predicting, identifying, and measuring seismic events associated with tsunamis, earthquakes, and volcanoes. The agency is charged with both detecting earthquakes and formulating earthquake warning messages communicated to appropriate audiences, including the prime minister, the Disaster Management Headquarters, the Emergency Team, local governments, the mass media and in some directly to the general public.[76]

JMA established the Earthquake Phenomena Observation Center (EPOC) in Tokyo, which collects information from over 3,200 seismographs and seismic intensity meters situated across Japan. The JMA also employs 200 sensors capable of detecting primary waves (which travel at speeds approximating five kilometers [3.1 miles] per second). Primary waves (P waves), emanating from an epicenter are the initial indicators an earthquake has been triggered. Though these waves are almost imperceptible to humans, sensor detection of primary waves may be used to calculate the epicenter of a seismic event, its magnitude, and when more damaging secondary waves (S waves), will arrive. Secondary waves travel about three kilometers [1.86 miles] per second.[77]

The P waves from the Great East Japan Earthquake of 2011 were detected at the closest inland sensor at 2:46:45 p.m. local time. That sensor functioned properly and recorded these P waves, which activated the national earthquake warning system alerting people working at businesses, railways, factories, hospitals, schools, and nuclear plants. Remarkably, the public's cell phones were mass alerted in a mere three seconds (2:46:48 p.m. local time). After the warning went out, actual ground shaking struck Sendai along the northeast coast thirty seconds later and Tokyo to the south ninety seconds after that. This alert-to-impact interval may seem minuscule, but it provided a sufficient window for countless businesses to shut down production lines, doctors to stop medical procedures, schools to get children under desks, cell phone–attentive motorists to pull off to the side of the road, railway operators to turn on backup electric generators, and rail engineers to begin a full stop of their trains.[78]

Fukushima Daiichi Nuclear Power Plant Complex and Na-tech Disasters

"Na-tech" disasters occur when natural hazards result in dangerous technological spills or releases.[79] They involve event chains characterized by a domino effect or a cascading series of outcomes, and they are a serious threat in many parts of the world. Sometimes natural disasters cause cascading effects. The Fukushima Daiichi nuclear power plant disaster is an example of a nuclear accident caused by a tsunami caused by an earthquake.[80] In this respect it is a compound disaster, because it is a disaster that triggered a secondary hazard. Compound disasters can occur simultaneously or sequentially.[81] Na-tech incidents involve a combination of natural and technological interactions. Most na-tech disasters begin from lightning strikes and floods.

The earthquake and tsunami that struck Japan on March 11, 2011, proved to be one of that nation's worst set of disasters since World War II. Owing to the highly regulated nature of the nuclear industry, the siting of nuclear power plants seeks to ensure that they are not situated near urban areas; however, what about natural hazards? Are threats of this type considered sufficiently in the siting of a nuclear facility? Though Japan's Tokyo Electric Power Company (TEPCO) had built a sizable seawall adjacent to its nuclear power complex, the company may not have considered the possibility of a strong earthquake followed by a great tsunami (able to far overtop its sea wall) when it established the Fukushima Daiichi plant on the Pacific Ocean shoreline. To briefly summarize what happened, the World Nuclear Association offers these points. Following a major earthquake, a fifteen-meter tsunami disabled the power supply and cooling of three Fukushima Daiichi reactors, causing a nuclear accident on March 11, 2011. All three cores largely melted in the first three days.

- The accident was rated 7 on the International Nuclear Emergency Scale (INES), due to high radioactive releases over days four to six, eventually a total of some 940 PBq (I-131 eq).
- Four reactors were written off—capable of generating a total 2719 MWe net.
- After two weeks, the three reactors (units 1–3) were stable with water addition but with no proper heat sink for removal of decay heat from fuel. By July they were being cooled with recycled water from the new treatment plant. Reactor temperatures had fallen to below 80ºC at the end of October, and official "cold shutdown condition" was announced in mid-December.
- Apart from cooling, the basic ongoing task was to prevent release of radioactive materials, particularly in contaminated water leaked from the three units. This task became newsworthy in August 2013.
- There have been no deaths or cases of radiation sickness from the nuclear accident, but over 100,000 people had to be evacuated from their homes to ensure this. Government nervousness delays their return.[82]

While many changes in the nuclear industry were made relating to design, operation, training, and regulatory activities, following Three Mile Island (1979) and the Chernobyl Disaster (1986), they were not enough to prevent the Fukushima Daiichi disaster in Japan. TEPCO, owner and operator of the facility, had prepared the nuclear complex for a major earthquake but not a major earthquake and, soon after, a tsunami.[83]

Because Japan has few natural resources of its own, a high priority was given to energy sources able to reduce the nation's dependence on oil imports. Over the past thirty years this has spurred on Japan's construction of nuclear facilities as energy providers. However, this strategy may be changing following the aftermath of Fukushima Daiichi. Japan is an island located in a seismically active area of the world. Due to its geographic location and heavily dense population, Japan's vulnerability to natural hazards such as typhoons, earthquakes, and tsunamis is greater than in many other countries. If Japan wants to continue to increase its dependence on nuclear power, then mitigation and preparedness practices need to be improved so they will be better able to adapt to the threats of natural disasters.

Immediate lessons learned from the disaster include new safety measures such as, "providing auxiliary power supply cars, fire engines with high-power water injection, installation of watertight doors for buildings containing important equipment, and alternative cooling systems for spent fuel pools,"[84] and better prediction and preparedness for "unforeseen" events. Kitamura claims that warning reports about the possibility of a tsunami were neglected by the nuclear community. Reports were issued by researchers at the National Institute of Advanced Industrial Science and Technology (AIST) and by civil engineering professors at Tohoku University that indicated the significant possibility of a tsunami recurrence in Japan since the last one had been 1,100 years ago.[85] This case demonstrates that even high-developed and technologically advanced nations have a hard time planning for events that are of very low probability but very high consequence. Yet it is the planning for such unexpected events that makes nations and their biggest utility companies more disaster resilient.

The second case takes up tornadoes. Tornadoes are extreme weather events that have killed many people and have destroyed or damaged a sizable amount of structures and property through the years. Much tornado activity is seasonal or is associated with severe storms, and tornado activity continues from year to year. The quest to provide threatened communities with reliable forecasts and longer intervals of advanced tornado warnings has been a goal of many atmospheric scientists. Just as in earthquake engineering, improvements in tornado and severe storm research have through the years saved lives. Successful mitigation is seldom newsworthy and attention grabbing, hence the contributions of both earthquake and tornado research often go unheralded.

We rely on scientists and engineers to protect us from the hazards and vulnerabilities that come with these hazards.

The Policy and Politics of Earthquake Research and Engineering

Earthquake research and engineering issues overlap many dimensions of emergency management. In the United States, earthquake research receives considerable attention and regular political support. The earthquake research and engineering community is both mature and politically influential. The United States is dotted by large and small earthquake research centers (see the "History's Lessons" box).

Earthquakes, like other disasters, may temporarily overwhelm the emergency response and recovery capacity of individuals, businesses, and state and local governments. The human and economic losses inflicted by an earthquake and its consequences may be so great that people, businesses, and governments outside the damage zone must provide a great deal of help. Consequently, earthquake threat and destruction have been addressed in national policy and federal law for many years.[86]

Earthquakes often strike with few or no measurable precursors. In spite of major scientific advances in both the science and technology of seismology, it remains extremely difficult for seismologists to provide accurate advance warning of the month, week, day, or hour a major earthquake will strike. Beyond their decadal or longer probabilistic timescales, it is difficult for them to provide the public with sufficient advance warning of when a major quake will hit. Regardless, seismic and geologic research has advanced dramatically over the past half century. Seismic research has led to seismic mapping. Those who engineer built structures, everything from one-story homes to skyscrapers, have made major lifesaving contributions to the field. They have helped design and build seismic-resistant structures, and they have disseminated model building codes appropriate for the seismic risk communities endure.

With the possible exceptions of Hawaii and Alaska, few American states are more prone to earthquake activity than California, the nation's most populated state. Consequently much of the history of U.S. earthquake policy at the national level is intertwined with California's earthquake experience. In 2013 California had more than 38 million people, and the state's delegation to the U.S. House of Representatives totaled 53, more than 12 percent of the chamber. Thus the state, along with a handful of earthquake-vulnerable states in the West and Midwest, have had considerable political influence in shaping U.S. earthquake policy.

In 1977 Congress, advised by seismic experts, determined that almost all fifty states are vulnerable to earthquakes and that a national policy was needed to address earthquake as a major natural hazard.[87] The culmination of this legislative work was the National Earthquake Hazards Reduction Act of 1977; (its implementing arm is a program that supports federal, state, local, and private research and planning to attenuate earthquake losses in seismic risk areas.[88]

The National Earthquake Hazards Reduction Program (NEHRP) has provided the framework for a national earthquake policy, and FEMA, after its formation in 1979, was designated the lead agency charged with coordinating that program until 2003. Under the NEHRP, FEMA worked with other federal agencies— the USGS, NSF, and NIST—the states, academia, and the private sector to minimize risk to life and property from future earthquakes. The primary goals of the program have been to make structures safer, better inform the public of earthquake threat, and advance better seismic mitigation. This entails the following:

- providing better understanding, characterizing, and predicting of seismic hazards
- improving model building codes and land-use practices
- learning risk reduction through post-earthquake investigation and analysis
- developing improved design and construction techniques
- promoting the dissemination and application of research results[89]

The NEHRP has external grant programs funded through FEMA, the USGS, NSF, and NIST. From 1979 to 2003 FEMA provided project grants through its state cooperative agreements program. The state matching requirement ultimately rose to 50 percent, and a share of federal-state funding had to be used for mitigation activities; some states used these funds to support seismic hazard loss reduction.

In the 1990s FEMA developed an earthquake simulation applicable and adaptable to most of the nation. It was called Hazards-U.S. (HAZUS), and FEMA distributed it free on the Internet. HAZUS is a powerful risk assessment software program for analyzing potential losses from earthquake. Its successor, Hazards U.S.-Multi-Hazard (HAZUS-MH), also models losses from hurricane, wind, and flood hazards.[90] The results of this research were used to mitigate the effects of disasters and to improve preparation for, response to, and recovery from such events. Not long ago FEMA announced the availability of a third generation of HAZUS-MH software.

One of the significant accomplishments of the NEHRP has been the development of seismic resistance standards for new construction and for strengthening existing buildings in earthquake-prone areas. FEMA work under the program facilitated creation of the Federal Response Plan (FRP). As mentioned, the FRP provided the basic framework for coordination of federal disaster relief work among the federal departments and agencies until it was replaced by the National Response Plan (NRP) in late 2004, and by December 2007 the National Response Framework (NRF).

Before its absorption into the DHS, FEMA had a National Earthquake Mitigation Program Office within its Mitigation Directorate. FEMA produced manuals, seismic safety provisions, and guidance documents that were the basis for U.S. seismic safety codes. For its part, the USGS produces earth science data, calculates earthquake probabilities, and supports land-use planning and engineering design, as well as emergency preparedness. The NSF promotes earthquake mitigating construction and siting, fundamental geotechnical engineering design, and structural analysis, in part through the Multidisciplinary Center for Earthquake Engineering Research (MCEER) housed at the State University of New York at Buffalo.[91] NIST and FEMA together work with state and local officials, model-building code groups, architects, engineers, and others to be sure that scientific and engineering research flows into building codes, standards, and practices.

The NEHRP Reauthorization Act of 2003 reassigned NEHRP lead agency authority from FEMA to NIST, but the law continued to hold FEMA responsible for earthquake emergency response and management, estimation of loss potential, and implementation of mitigations actions.[92]

The Policy and Politics of Tornado Research

Vast areas of the United States are vulnerable to tornadoes and severe storms. Government officials at the federal, state, and local levels are responsible for providing public warnings of tornado and severe thunderstorm threats. How they do this and how well they do this are matters of controversy. Also controversial is the role of government in tornado mitigation activity. Moreover, not all tornado-damaged jurisdictions win presidential declarations of major disaster or emergency. Such determinations are sometimes a function of damage assessment after the fact.

Most people can recall previous tornado disasters reported by the media. This gives tornado disaster events broad, but thin, public attention over the nation. Sometimes new laws or policies have stemmed from tornado disasters. Some have argued that there is actually a tornado politics, very much intertwined with matters of how science comes to influence politics.[93]

Three issues are paramount in tornado policy: the degree of preparedness; the definition of disaster; and the amount of federal aid that should go to individuals, state, and local governments after a tornado or severe storm disaster.[94]

Political and policy factors have influenced all three issues. Many state and local governments are not as prepared to meet the threat of tornadoes as they could be. Local elected officials have difficulty determining the costs and benefits of spending public funds on tornado preparedness measures. They often seriously discount the probability that a tornado will strike their jurisdiction.

Meteorologists rely on weather radar to provide information on developing storms (see the "How Things Work" box). The National Weather Service (NWS) strategically located Doppler radar facilities across the nation. Doppler radar is capable of detecting air movement toward or away from the radar. Early detection of increasing rotation aloft within a thunderstorm may allow authorities to issue lifesaving warnings before the tornado forms. Not all tornadoes, however, are detectable or traceable on radar, regardless of the type of radar technology used.

Nevertheless, the increased use of Doppler radar by the NWS and other organizations has done much to improve public warning time in advance of tornado strikes. It is ironic that improvements in the handling of tornado watches and in the timely broadcast of tornado warnings issued by federal agencies and by radio and television news organizations have inadvertently alleviated some of the burden of emergency notification handled by local governments. Local governments that do not maintain adequate tornado warning systems for their people because of overdependence on tornado tracking by others may be derelict in fulfilling their public responsibility.

An unusual problem facing many local governments in more rural areas has been the loss of local privately owned radio stations owing to consolidations, mergers, and acquisitions in the radio industry. As independent local radio stations have been absorbed by much larger radio broadcast corporations, many rural or remote localities have lost an avenue for issuing unique tornado warnings to their local populace. However, local emergency management officials may access and use radio broadcast facilities in their environs under the Emergency Alert System (EAS), a public warning system operated by the Federal Communications Commission in conjunction with FEMA and NOAA to allow the president to address the nation in emergencies and when needed to issue various types of alerts. EAS equipment is a core element of the country's first response effort. Clear Channel's senior vice president of engineering, Steve Davis, said the following:

> Our responsibility as a broadcaster is twofold—to deliver the equipment to local authorities (in many cases, we subsidize the equipment also), and to ensure that the EAS equipment at each of our stations is fully operational so that local or Federal authorities can automatically interrupt our broadcasts with public-safety messages.[95]

How Things Work: The National Oceanic and Atmospheric Administration National Severe Storms Laboratory

The NOAA National Severe Storms Laboratory (NSSL) is a federal research laboratory under the NOAA Office of Oceanic and Atmospheric Research. NSSL research spans weather radar, tornadoes, flash floods, lightning, damaging winds, hail, and winter weather. NSSL is located in the National Weather Center (NWC) in Norman, Oklahoma. The NWC houses a unique combination of University of Oklahoma, NOAA, and state organizations that work together to improve understanding of weather.

NSSL has a strategic research partnership with the University of Oklahoma's Cooperative Institute for Mesoscale Meteorological Studies (CIMMS), one of the NOAA joint institutes. CIMMS enables NSSL and university scientists to collaborate on research areas of mutual interest and facilitates the participation of students and visiting scientists.

The laboratory works under the following charge:

- We know that changing demographics will place more people in the path of natural hazards.
- We have a responsibility to continue exploration and discovery in new areas to lay the foundation for services of the future.
- We have a responsibility to translate discoveries into tangible benefits that can impact society for generations to come.
- We have a responsibility to enable the nation and society to make informed decisions in the decades to come to prevent loss of human life.[97]

Tornado Dynamics

NSSL researchers have created a computer model that simulates a tornado-producing thunderstorm in 3-D. This model is used to study what changes in the environment cause a thunderstorm to produce a tornado and how the tornado and storm behaves as it encounters different weather conditions.

Most tornadoes come from rotating thunderstorms, called supercells. However, nearly 20 percent of all tornadoes are associated with lines of strong thunderstorms called "quasi-linear convective systems" (QLCS).[98] QLCS torna-does frequently occur during the late night and early morning hours when the public is less aware of severe weather hazards. NSSL scientists are looking for ways to detect non-supercell tornadoes more effectively.

Tornado Detection

The NWS of NOAA is upgrading the national network of weather radars dual-polarization technology, contributing to its ongoing scientific and engineering development. NSSL researchers discovered dual-polarization radars can detect debris from a tornado, helping forecasters pinpoint a tornado's location even at night or if it is wrapped in rain.

NSSL has a research-phased array radar that can scan the entire sky for severe weather in less than a minute, five times faster than current weather radars. This phased array radar has been used to capture developing tornadoes both in QLCS and supercells. Researchers are hoping to collect more high-resolution data on these storms to look for clues on radar that a tornado is forming. Phased array radar has strong potential to aid the NWS in the forecast and warning decision process by providing new radar data more quickly.

Tornado Warning Decision Support and Forecasting

NSSL continues to work on an automated multi-radar, multi-sensor (MRMS) system that quickly integrates data streams from multiple radars, surface and upper air observations, lightning detection systems, and satellite and forecast models. The MRMS system was developed to produce severe weather and precipitation products for improved decision-making capability within NOAA.

NSSL On-Demand is a web-based tool that helps confirm when and where tornadoes may have occurred by mapping circulations detected by radar on Google Earth satellite images. NWS forecasters can quickly review warnings and check their accuracy with this system. Emergency responders and damage surveyors have also used On-Demand to produce high-resolution street maps of affected areas so they can more effectively begin rescue and recovery efforts and damage assessments.

NSSL and the NOAA NWS collaborate to streamline moving research into practical operations. NSSL has developed severe weather warning applications and decision support systems that will make the forecasters' job easier. The result will be improved NWS warning services for the public, increased detection accuracy, and longer lead times.

NSSL Warn-on-Forecast project aims to create highly detailed computer weather forecast models that predict what the atmosphere will look like in the future. These models are unique because they will use the latest weather observations and radar scans to continuously recompute forecasts. The lab wants these forecasts to accurately predict when and where tornadoes will occur in the first hour of their formation so forecasters can issue warnings based on that forecast and give people more time to find shelter.

Local emergency management officials must now understand and be prepared to use EAS equipment residing at transmission facilities of private radio broadcasters. The NWS is the most frequent user of EAS equipment, for things like tornado warnings, but it is also available to all local and federal authorities.[96]

Since tornado and severe storm disasters have such low probability, they do not have high political salience. People residing in areas recently hit by these disaster agents may for a time accord these agents high political importance. Still, the infrequency of tornado experience for each single locality encourages local governments collectively to underprepare for tornado disasters. Many state and local officials who have not had recent experience with a devastating tornado or tornado outbreak (which is a rash of many tornadoes over a region) have decided that the risk of a touch down is simply not great enough to warrant allocating funds to better prepare for one.

There are some steps that local jurisdictions can take to prepare for and mitigate the effects of tornadoes and severe storms. They include installing siren-warning systems, building reinforced structures near mobile home communities, and supplying NOAA self-activating radios to residents.

According to the NWS, the most tornado-vulnerable structures are permanent homes and mobile homes. Some 77 percent of tornado fatalities are among those in mobile homes. One mitigation measure that would probably save lives is to limit the use of mobile homes. However, it is extremely expensive to provide alternate housing, and it is politically infeasible to win approval of such a measure in law. Nonetheless, many mobile homes cannot withstand the high winds associated with tornadoes. Despite the increased risk, the 5 to 6 percent of the population who live in mobile homes and the manufactured-housing industry would aggressively fight any attempt to limit the sale or location of mobile homes. As a result, much of the federal government's tornado mitigation policy rests on a program of public education. One of the options for local municipalities, as previously mentioned, is the building of reinforced shelters in mobile home neighborhoods where residents may go to better protect themselves in the event of a tornado.

The NWS, the NSSL, and the EAS, in cooperation with state and local emergency management agencies, shoulder much of the burden for providing public warning of tornado threat. Privately owned television and radio news organizations, particularly The Weather Channel, provide extensive tornado tracking, severe storm tracking, and public warning coverage. The NWS continuously broadcasts updated weather warnings and forecasts that can be received by the NOAA Weather Radios sold in many stores. The average range of the radios is forty miles, depending on topography. The NWS recommends purchasing radios that have both a battery backup and a tone-alert feature that automatically alerts people when a watch or warning is issued. Inadequate advanced warning time, wind-vulnerable structures, and an unaware or heedless public may result in many people being unnecessarily exposed to tornado or severe storm threats. Public education, drills, practices, siren warnings, and feasible structural mitigation (there is no such thing as a perfectly windproof building) could all help in reducing the public's vulnerability to tornadoes. However, strong national, state, and local leadership is needed to reach such goals.

Critical scientific and technical issues in tornado disasters include effective forecasting, credible public announcements of tornado watches and tornado warnings, tracking the general path of sighted tornadoes, public evacuation in advance of tornado hazards, and appropriate sheltering of evacuees. The matter of demobilizing—that is, issuing of an all clear notice—standing down responders, and facilitating the return of people to their homes and offices is an additional responsibility. As in most disasters, emergency response to damaged areas, search and rescue operations, emergency medical services, utility repair, business and residential insurance against wind and rain damage, disaster relief from public sources, and long-term recovery efforts may all be part of

tornado emergencies and disasters.

Engineering and Public Infrastructure Policy

If emergency management is becoming more federally centered, one might also ask if U.S. disaster policy has become a modern and growing public works subsidy program for state and local governments.[100] How is infrastructure defined, and who pays for its post-disaster repair? Are buyouts and relocations replacing engineered disaster mitigation (e.g., flood levees, flood control works)? USACE is an agency with a very long history of work in construction, operation, and maintenance of infrastructural works (dams, levees, revetments, reservoirs, and the like), and nonstructural, disaster mitigation works. USACE also owns, operates, and maintains other massive infrastructure (lock systems, navigable waterways, bridges, ports, and the like). Consequently, USACE is an important player in the nation's system of emergency management.[101]

The federal government had been in the business of building flood control works since at least the 1920s; however, by the 1980s, U.S. emergency management became more extensively involved in restoring disaster-damaged public infrastructure.[102] Such infrastructure included highways, roads, streets, bridges, ports, airports, flood control works, utilities such as water and sewer systems, electrical systems, natural gas distribution networks, and telephone and cable systems, plus government-owned buildings.

Communications infrastructure became a huge new concern of emergency management. The astounding growth of the Internet and the World Wide Web made possible colossal advances in the range and depth of information technology. Maintenance of routers and hubs, protection of transmission vehicles (from hard lines, to fiber-optic cables, to cell towers, to wireless instruments), and most particularly perpetuation of connectivity all became concerns of emergency managers. This involvement by emergency managers, public and private, came about in part because so many had come to depend on the availability of the Internet before, during, and after disasters.

Economic and social dependence on these communications and information pathways convinced political leaders that cybersecurity was essential. Computer hackers who disrupted Internet usage came to be recognized as potential "terrorists" and purveyors of disaster. By the 1990s, disasters and emergencies that damaged or threatened to damage any of these critical systems and facilities became a growing concern and a new core area of responsibility for FEMA. The vulnerability of these systems and facilities to both terrorism and natural disaster forces encouraged policymakers to fund scientific and engineering endeavors aimed at advancing the fortification and resilience of these systems and structures. In 1997 a report by the Presidential Commission on Critical Infrastructure and Protection convinced Clinton of the need to issue a presidential directive (number 63) in 1998, pressing federal agencies to act on these vulnerabilities. George W. Bush went much further on this subject when he issued Homeland Security Presidential Directive-7 (HSPD-7) in 2004.[103]

In many respects, one of the main criteria by which disaster management effectiveness has been judged is how quickly government agencies restore lifeline services and public infrastructure after a disaster. Repairing or replacing damaged public infrastructure often costs millions if not billions of dollars. Americans have become accustomed to virtually uninterrupted delivery of lifeline services. Interruptions of electricity service, even for only a period of hours, are considered "disasters" or "emergencies." Loss of Internet availability and connectivity has grown to have massive economic and social implications. Hence, the president, Congress, and all federal agencies engaged in public infrastructure operations or publicly subsidized construction have come to recognize government's key role in the aftermath of disasters.[104] Since the mid-1950s, state and local political executives and lawmakers have come to appreciate the importance of federal post-disaster subsidies to repair or replace public infrastructure.

Although disaster mitigation had become a policy goal set forth in law in 1974, it was not until the Northridge earthquake in Los Angeles in January 1994 that FEMA was authorized to fund public infrastructure repairs so that they were more than restoration of original structures.[105] For example, California freeway overpasses that collapsed owing to the Northridge quake and its aftershocks were rebuilt, at great public expense, to meet more powerful seismic shocks.[106] The U.S. Department of Transportation (DOT) funds a major share of the federal highway system and has programs and resources in place to repair or replace disaster-damaged segments of its

national system, as became necessary after the tragic collapse of a bridge and a major segment of an elevated eight-lane interstate highway in Minneapolis in August 2007. FEMA also subsidizes state and local government post-disaster road repair, as well as repair of disaster-damaged utility infrastructure, even when utilities are privately or shareholder owned.

Summary

Science and engineering have helped grow and professionalize the field of emergency management. Moreover, the scientists and engineers who study hazards and disaster phenomena have found ways to engage the political process in order both to promote the public interest and to solicit the funding resources they need to do much of their work. Big science applications of disaster research especially require subtle forms of political lobbying of lawmakers. It is clear that disaster study informs but also transcends emergency management.

This chapter posited that different types of disaster agents are of interest to different types of scientific and engineering clientele groups.[107] The scientific and engineering interests dedicated to the study of earthquakes are not identical to the scientific and engineering interests focused on hurricanes. Those who focus on tornadoes and severe storms, as meteorological phenomena, lobby often as a group separate from the two just mentioned. In turn, the scientific and engineering groups concerned with flood control and water resources only partially overlap the other groups.

This means is that these communities of practice (CoPs) sometimes conflict with one another when they seek to secure government support and funding of their respective scientific endeavors. However, these groups also have a great deal in common. They often form alliances, or at least tolerate their differences, in the interest of showing a united front to policymakers, who are often rapaciously looking for ways to reallocate government funding to purposes they judge more important than basic or applied scientific and engineering research. For example, each year the federal budget request for climate science research is fashioned as a joint package of requests cooperatively crafted by federal officials whose agencies are researching different features or aspects of climate change or global warming. This package is reviewed by various White House offices, including the Office of Management and Budget. The logic of this research budget request is that the package is better justified and defended as a whole rather than as separately and independently submitted budget requests.

An unfortunate aspect of U.S. disaster policy is that most of the government scientific and engineering agencies, offices, and programs important to emergency managers are neither in FEMA nor in the DHS. Some of these organizations are capable of making predictions of disaster frequency and magnitude, some design various countermeasures or advance disaster mitigation research and engineering, some work to improve government disaster preparedness and response, and some are capable of facilitating disaster recovery. The NOAA, the USGS, the NIST, NASA, the EPA, and the NSF all operate very much independently of FEMA and DHS. Scientists of the National Hurricane Center, the U.S. Tsunami Warning Center, the NSSL, the National Center for Earthquake Engineering, the Centers for Disease Control and Prevention, the National Center for Atmospheric Research, and the National Climate Data Center have major ongoing research responsibilities, only some of which draw them into disaster policy and management. Not to be overlooked is that in 2006 DHS-FEMA established a National Preparedness Directorate, which includes a technological hazards branch. However, many of the experts in this directorate are largely focused on terrorism prevention.

The public works engineering side of emergency management is critical in disaster policy's intergovernmental relations. In many homeland security realms, research involves sizable pools of government contractors and universities working on security-related technologies. This has moved emergency management deeper into the world of national security and defense-related contracting. Although the president is rarely personally involved in issues of disaster-related science and engineering, certain technoscientific problems do percolate to the presidential level. For example, President Obama has taken an interest in climate science owing to a spate of coastal disasters, some suspected of being unusually destructive owing to the effects of sea level rise along the Gulf and Atlantic coastlines.

In a speech at Georgetown University on June 25, 2013, President Obama said the following:

> The 12 warmest years in recorded history have all come in the last 15 years. Last year, temperatures in some areas of the ocean reached record highs, and ice in the Arctic shrank to its smallest size on record

—faster than most models had predicted it would. These are facts.

Now, we know that no single weather event is caused solely by climate change. Droughts and fires and floods, they go back to ancient times. But we also know that in a world that's warmer than it used to be, all weather events are affected by a warming planet. The fact that sea level in New York, in New York Harbor, are now a foot higher than a century ago—that didn't cause Hurricane Sandy, but it certainly contributed to the destruction that left large parts of our mightiest city dark and underwater.

The potential impacts go beyond rising sea levels. Here at home, 2012 was the warmest year in our history. Midwest farms were parched by the worst drought since the Dust Bowl, and then drenched by the wettest spring on record. Western wildfires scorched an area larger than the state of Maryland. Just last week, a heat wave in Alaska shot temperatures into the 90s.

And we know that the costs of these events can be measured in lost lives and lost livelihoods, lost homes, lost businesses, hundreds of billions of dollars in emergency services and disaster relief. In fact, those who are already feeling the effects of climate change don't have time to deny it—they're busy dealing with it. Firefighters are braving longer wildfire seasons, and states and federal governments have to figure out how to budget for that. I had to sit on a meeting with the Department of Interior and Agriculture and some of the rest of my team just to figure out how we're going to pay for more and more expensive fire seasons.[108]

Decisions regarding USACE rebuilding the levees around New Orleans; decisions to allow the rebuilding of the Northridge earthquake–damaged California infrastructure to exceed original design construction in the interest of disaster mitigation; decisions about funding rebuilding in the aftermath of Superstorm Sandy; decisions concerning how better to protect structures and their occupants from cyclonic forces in the aftermath of the Tuscaloosa, Alabama; Joplin, Missouri; and Moore, Oklahoma, tornado disasters; plus decisions about how to advance cyberterror preparedness without violating federal privacy laws are a few examples of things that draw presidents into this realm.

Key Terms

Chapter 6 Intergovernmental Relations in Disaster Policy

The Grievously Wounded Lie on the Sidewalk as Police Respond, in One of Two Explosions April 15 at the 2013 Boston Marathon in Boston. The Twin Explosions, Allegedly Caused by Two Terrorist Brothers, Shattered the Euphoria of the Boston Marathon Finish Line, Sending Authorities out on the Course to Carry off the Injured while Runners and Spectators were Rerouted away from the Smoking Site of the Blasts.

(Source: AP Photo/Kenshin Okubo.)

LOCAL GOVERNMENTAL PROVISION FOR ADEQUATE EMERGENCY RESPONSE IS CRITICAL, but in this nation emergency management has many players and response is only one element. Mitigation, preparedness, and recovery are no less important. In the United States, government management of major disasters is done through intergovernmental relations or it is not done at all. As mentioned before, one thing obvious to anyone who studies U.S. disaster policy and management is the tremendous degree of overlap and interdependence of American governmental jurisdictions. The Federal Emergency Management Agency (FEMA) and the U.S. Department of Homeland Security (DHS) are expected to create an emergency management partnership with other federal agencies, state and local governments, volunteer organizations, and the private sector to better serve the public. DHS and its FEMA are expected to establish, in concert with their state and local partners, a national emergency management system that is comprehensive, risk-based, and all-hazards in approach. Hazard mitigation is supposed to be the foundation of the national emergency management system. The federal government, in conjunction with state and local government, is counted on to provide a rapid and effective

response to, and recovery from, declared disasters. The federal government is asked to help strengthen state and local emergency management.

What happens when people on different levels of government must work together to address a disaster or emergency? Emergency management is by its very nature intergovernmental and intercommunity—it requires government agencies and officials to coordinate and cooperate with each other on the same level and across hierarchical levels. It also requires that communities cooperate and coordinate in preparing for, and responding to, a disaster.

In the United States many policies are implemented through intergovernmental relations. As a term, *intergovernmental relations* defines the interaction of federal, state, and local officials and officials of the private and nonprofit sectors, as they collectively implement public policy. The term includes special district governments as well as general-purpose governments. General-purpose governments are cities, counties, towns, or other municipal jurisdictions that collect broadly based taxes to pay for a wide variety of public services. Special district governments, usually spun off from cities or counties, customarily operate to provide one or two specialized services funded from an earmarked (dedicated) single tax or sometimes user fees.[1] Intergovernmental relations also encompasses the interaction of these bodies with groups and organizations of the nonprofit and private sectors. On top of this there are fifty states, the District of Columbia, and an assortment of trust, commonwealth, or Compact of Free Association[2] governments as well as some 87,000 substate governments in the United States.

This chapter examines the interaction of people working within specific levels of governmental and between levels through intergovernmental program management. This chapter also provides an overview of the policy and politics of federal-state-local interchange, mutual aid agreements, interstate assistance compacts, and preparedness and response agreements in disaster management. The National Response Plan (NRP), recast in December 2007 as the National Response Framework (NRF), and its tactical application, the National Incident Management System (NIMS), are discussed.[3] Also considered are two hugely important nongovernmental players in disaster management: Voluntary Organizations Active in Disaster (VOAD) and government contractors that both engage in disaster management work for various governmental units that retain them.

How Things Work: The Boulder County Floods of September 2013

On Monday, September 9, 2013, there was no way to know that Boulder County, Colorado, was in the first hours of what experts would ultimately call a 1,000-year rain and a 100-year flood. The rain continued all day Tuesday and by Wednesday, 9:20 p.m., emergency management officials issued a flash flood warning for the city of Boulder and parts of Boulder County until 10:45 p.m., with continuing rain expected.[6]

At 10:01 p.m. Wednesday, the city of Boulder activated flood sirens near Boulder Creek, urging anyone near the waterway to seek higher ground immediately. Don't try to cross the creek by any means, people were told.[7]

"The thing that was somewhat of a surprise to everyone was the setup of the really, really, really, heavy, heavy, heavy, rain over the foothills," said Bob Glancy of the National Weather Service (NWS). "Some areas were getting close to their annual rainfall in a three-day period. This was an extremely rare event."[8]

One flood survivor declared, "You could hear debris in the water slamming into and rubbing against the bridge. For the next hour, it kept raining very hard, and you could see the water continue to rise. I remember being pretty worried about getting stuck where we were." Just before midnight, a heavy mudslide in Fourmile Canyon rendered the road impassable at Colorado Route 119 and Gold Hill. There were several inches of water on the roadway.[9] The steep walled chasm was home to many people who chose to reside there to enjoy beautiful mountain vistas, a pristine stream, and a wonderful outdoor life.

Across the foothills to the south, Bret Gibson, the Four Mile fire chief, was getting increasingly worried. Rain measurements had reached three-quarters of an inch per half hour. "We got information that Four Mile Creek was flooding north Boulder, Boulder Creek was flooding central Boulder, and that Gregory Canyon was flooding parts of the Hill," Boulder police chief Mark Beckner said. "We were scratching our heads over that one, because we had never planned for flooding that high up on the Hill." Also, the police chief said, "We were finding the flooding was worse than the data would indicate. What we were getting in the streets didn't match what the charts told us should be happening." In Boulder, the tone on the city's Facebook page would shift with the next posting: "Street flooding is occurring in parts of the city of Boulder. Motorists are urged to avoid driving through flooded areas."[10]

The water surging down from the high country was a big problem. But it wasn't the whole problem.

"What we had always trained on and practiced on and talked about, was, 'What if a [storm] cell sets up over Four Mile Creek, or Boulder Creek, and dumps six inches of rain in an hour? Here's what to expect,'" Beckner said. "But the scenario we had was that the whole region was getting dumped on."[11]

At the NWS data collection point near the National Institute of Standards and Technology (NIST), as of 6:00 p.m. Thursday, it showed a staggering 9.08 inches of rain had fallen in Boulder since 6:00 p.m. Wednesday. It was the highest one-day total on record, swamping the previous record of 4.80 inches on July 31, 1919.[12]

At 10:15 p.m. Thursday, an emergency announcement was broadcast downtown that a section of the city from the mouth of Boulder Canyon east to Broadway, and from Marine Street north to Pearl Street, was now being ordered to evacuate. Some residents would hear it clearly; others would hear it as unintelligible garble.

Police Chief Beckner later said he didn't know how many people actually did evacuate— and would likely never know. "What are you going to do?" asked the chief. "We called for an evacuation, but mandatory? You're not going to arrest people who don't leave. We were telling people to evacuate. But if you don't listen to us, at least we told you."[13]

Before the flood, Boulder police average on a typical day 546 incoming phone calls. The Thursday grand total of all calls hit 2,955.[14]

Throughout Fourmile Canyon, the infrastructure was degrading along with the conditions. Gibson, the Four Mile fire chief, said he had men stationed throughout his district, watching drainages and roads, but they were unable to make progress rescuing residents while the rain fell in by the buckets and the creek roared out of control.[15]

Boulder had become increasingly isolated by a seemingly endless wave of road and high-way closures. "There wasn't really a sense of panic. Where, with a fire, you get burned if you don't leave, the water just wasn't high enough to be panicked about." A lot of people across the region by now were in the same situation. A few hours later, one woman escaping the floodwaters was on the move again, hiking up to Melvina Hill with search and rescue personnel and then being driven over to Monument Hill, where she was led on to a Black Hawk helicopter and flown to Boulder Municipal Airport.[16]

The Colorado National Guard started pulling people out of Jamestown in the afternoon. About a half-dozen flights also lifted off out of Salina on Friday afternoon, Chief Gibson said, with the old, the injured, and the exhausted getting first seats on the choppers. The weather broke Saturday. And while the day would turn out to be a big improvement over Friday, the chaos had not quite played itself out yet. The skies over western Boulder County were alive on the first sunny morning in five days, as the National Guard mounted an airlift operation from Boulder Municipal Airport. The Guard's Lt. Mitch Utterback believed it to be the largest undertaken on U.S. soil since Hurricane Katrina.[17]

By the end of the day Saturday, the total evacuated from the battered mountain communities would reach more than 1,200, including some 500 who were driven out of Lyons, one of the most heavily damaged towns. "We landed and there was a line of emergency personnel, firefighter-type people, all in their gear, and they were slapping hands with the kids as they walked toward the terminal," said a fifth grade teacher who was evacuated with many families and children.[18]

Fourmile Canyon saw great progress Saturday. Search and rescue crews had surveyed every structure in the area, Gibson said. They may not have reached every front door, but they had laid eyes on every home. At 5:35 a.m., the Colorado Office of Emergency Management announced that late the previous night, President Barack Obama had, at the request of Colorado governor John Hickenlooper, issued a disaster declaration for Boulder County, ordering federal aid for county residents, to complement state and local recovery efforts in the area affected by severe storms, flooding, landslides, and mudslides.

Within a few days, more than 7,600 county residents would be applying for assistance from FEMA. Miraculously, Boulder would learn that no one in the city limits was killed. In Longmont, too, no lives were lost. Boulder County, battered and more than a little bruised, had withstood perhaps the greatest storm many of its residents will ever see—the kind of storm they'd been warned of for decades.

Boulder Mayor Matt Appelbaum summed it up this way: "We will learn from this. And we will be better."[19]

Unfortunately, in Boulder Canyon and across the damage zone, four lives were lost. For the entire event, Boulder County counted 345 homes destroyed and 557 homes damaged. In addition the county tallied damage to thirty-three commercial properties and three more were totally destroyed. A remarkable 1,102 people were evacuated by air, even more than those evacuated by road: 707. Lessons here are several. Boulder County, the city of Boulder, and University of Colorado, which experienced flooding on portions of its campus and which conducted its own evacuation of students and others, are institutions on the cutting edge of disaster preparedness and mitigation. Boulder's concentration of weather and climate experts is unparalleled. The people of Boulder County, owing to their awareness of seasonal and mountain weather hazards, as well as their long-running experience coping with mountainous terrain, avalanches, heavy snow accumulations, and landslides, know about the dangers of flash flood. Most can make the connection between fire-ravaged forestland rainfall runoff and how this may increase the chance of flooding. The area has well-trained and experienced emergency managers and responders. Ironically, Boulder Creek inside Boulder's city limits is a national model of flood mitigation and recreational development.

Nonetheless, the Boulder County area has many areas vulnerable to flash flood. Nearby, Big Thompson Canyon from Estes Park to downriver areas flooded tragically in 1976. Then 143 were killed and 150 injured. Many who perished in that disaster were visitors unaware of how to respond to torrential canyon flooding that rapidly wipes out roads and bridges. Rainfall amounts in Boulder County in 2013 were nearly as great as those in 1976, though the cloudburst in the Big Thompson flood was arguably more voluminous and transpired in a shorter interval. Clearly, Boulder County's preparedness, warning systems, and response were far superior to those in place in the Big Thompson flood. Yet today there is much greater tolerated vulnerability to flash flood in the region owing to the desirability of building homes along the canyons, near the streams, and in remote highly scenic areas.

This mini–case study displays nearly all of the generic players that come forward in serious local disasters. The scientific community helps identify the threat, monitors its development, and works with local emergency management officials and the news media to issue warnings to the public. Local fire companies and police departments, either working as emergency managers or cooperatively with them, mobilize and deploy in the interest of public safety, search and rescue, evacuation, traffic management, flood fighting, and the like. City and country authorities, backstopped by the state emergency management agency, labor to address the mounting human needs created by the disaster and its displacement of people living in the hazard zone. The Colorado governor asks the president for, and quickly receives approval of, a major disaster declaration, which activates the NRF and NIMS. It also aids Colorado's state emergency management agency and ramps up FEMA help and presence at damage sites. Charitable organizations swing into action ministering to individuals and families living in temporary public shelters. Contractors, sometimes paid, sometimes not, help clear blockages in river channels, divert floodwaters from local downtowns, clear debris from public and private properties, assist in road repair and emergency bridge building. In many ways the Boulder area flood represents quintessential U.S. emergency management and exquisitely frames the intergovernmental nature of American disaster management.

Intergovernmental Program Management

America has a highly decentralized federal system, which under the U.S. Constitution affords the national government a range of authority, with some powers reserved for the states under the Tenth Amendment.[4] The federal and state governments share authority concurrently in some domains, such as in the regulation of business, education policy, health care, and corrections.

In U.S. emergency management, shared authority is not supposed to be a top-down command and control system[5](see the "How Things Work" box).

DHS-FEMA cannot, and the previously independent FEMA before it could not, actually "command" state and local officials in matters of emergency management.[20] Instead, there is supposed to be a bottom-up approach, wherein local political subdivisions (cities, towns, villages, boroughs, and counties, etc.) are primarily responsible for emergency management, unless those governments have been overwhelmed by the disaster or emergency.

Moreover, in some states, local governments, although they are legally vestiges of their respective state governments, are sometimes accorded certain powers under home rule provisions under the state constitution, or through enabling statutes. This underscores the need for multiagency and multijurisdictional coordination in emergency management work. However, many presidential and DHS initiatives in this homeland security era have reintroduced command and control strategies under which federal officials get to assume top-down leadership positions, and state and local authorities are expected to submit.[21] Owing to competition between homeland "defense" interests and homeland "security" interests, both seeking political attention and resources, military command-and-control type organizational arrangements have found their way into many realms of emergency management.

A well-coordinated and well-managed intergovernmental approach to disaster often involves a vast number of government-to-government arrangements, agency-to-agency memorandums of understanding (MOUs), interstate compacts, and pre-disaster preparedness and response agreements. Coordination of allof these public, private, and nonprofit organizations is a core purpose of emergency management.

Federal-State Agreements

From 1979 to 2003, the FEMA relationship with states and localities was primarily through agreements with state offices of emergency management and then, by extension, with local emergency management offices. FEMA allocated certain program grant funds to state offices of emergency management, and those offices in turn passed some or most of this funding onto local offices of emergency management. States, for better or worse, were the chief points of contact for most local governments seeking federal emergency management funding. This remained so even after 9/11 and into the era of homeland security.

Today, much as in the past, FEMA success in carrying out its missions is directly related to its success in interagency and intergovernmental coordination. Today's FEMA has authority, funding, and some assets but must depend on other federal departments and agencies to provide additional resources to ensure a complete federal response. Many assume that it is the job of FEMA to physically deliver most or all forms of federal assistance in a president-declared major disaster or emergency. This is incorrect. The job of FEMA is to plan, prepare, and respond to disasters in a way that functionally coordinates, or helps to coordinate, the provision of federal resources, human-power, and equipment possessed by "other" federal departments, agencies, and offices. Relatedly, it is the job of FEMA to help harmonize the delivery of federal resources and services to state and local governments, as well as to participating nonprofit voluntary organizations and retained private, for-profit contractors, under the NRF and NIMS.

In the 1990s, FEMA generated many new federal-state agreements under the agency's response to the second-round National Performance Review, a Clinton administration effort spearheaded by Vice President Al Gore aimed at reinventing federal government so that it would work better and cost less. Director James Lee Witt declared, "A centerpiece of our reinvention is changing the way in which we do business with the States by empowering them through Performance Partnerships."[22] FEMA asked state officials to integrate disparate programs into multiyear, risk-based agreements signed by the president and their respective governors. FEMA funding to the states was to be consolidated into two streams, one pre-disaster and the other post-disaster. FEMA authorities expected this to reduce state agency reportage to the federal agency. State officials also hoped that this might reduce what they perceived as FEMA micromanagement of existing grant processes.

Governors and state emergency managers need DHS and FEMA technical assistance and financial resources. However, governors and state legislators cannot afford to commit state resources to emergency management on an open-ended basis. Governors do have some degree of political influence in shaping the policies and operations of the federal government. Governors, who often believe they are being obligated by FEMA to do too much for too little support, may press their arguments directly to the president or Congress. Correspondingly, in the 1990s, FEMA officials could only expect to leverage the resources they received from the Congress in modest ways. In other words, the relatively few resources FEMA could provide states and localities impacted the nature and degree of governor and state commitment to emergency management. The success or failure of FEMA programs before the 9/11 terror attacks rested on negotiated partnerships with states sweetened only by very modest infusions of federal funds "between" disasters for certain state and local preparedness and mitigation activities.

FEMA of 1979 through 2002 had, and the DHS-FEMA since from 2003 to now has, specific inter-governmental relations goals. FEMA is expected to establish and maintain an emergency management partnership with other federal agencies, state and local governments, volunteer organizations, and the private sector (e.g., government contractors, corporate-owned public utilities, disaster service industry firms) to better serve their mission. Federal agencies are expected to establish, in concert with their state and local partners, a national emergency management system that is comprehensive, risk-based, and all-hazards in approach. They are expected to make hazard mitigation the foundation of the national emergency management system.[23] They are supposed to provide a rapid and effective response to, and recovery from, declared disasters. They are asked to strengthen state and local capacity to carry out emergency management duties. The NRF and NIMS has perpetuated these goals, principles, and doctrines. State governments, and a great many local governments, have immensely greater capacity to undertake emergency management work today than they did even a decade ago. Many of these subnational

emergency management bodies have become better staffed, much more professionalized, better equipped and often with cutting edge technology, and better funded by state and local budgeted dollars.

FEMA of today, and for 1979 to 2003, is divided geographically into ten standard federal regions, and each regional office is directed by a politically appointed regional director. See DHS-FEMA standard federal regions in Figure 6-1.

Regional offices allow modern FEMA to decentralize some operations geographically. Officials in these regional offices have an opportunity to become familiar with their state and local counterparts who engage in emergency management. Good working relationships of the individual directors and the governors in their respective regions often help facilitate emergency preparedness and response to disasters and emergencies.

Capable FEMA regional administrators and personnel sometimes contribute mightily to emergency management work in their regions, particularly when they work well with federal coordinating officers (FCOs) assigned by the president to manage active major disasters and emergencies declared in their respective regions (see the "How Things Work" box). Correspondingly, weak, inept, inexperienced, or incompetent regional directors and officials, some appointed owing to their campaign support of the president, who make little effort to engage governors, mayors, and other key elected or administrative officials of their region sometimes bungle federal response and sour federal relationships with state and local elected officials and emergency managers.

Figure 6-1 States, Territories, and the District of Columbia, by Respective Federal Emergency Management Agency Standard Federal Region
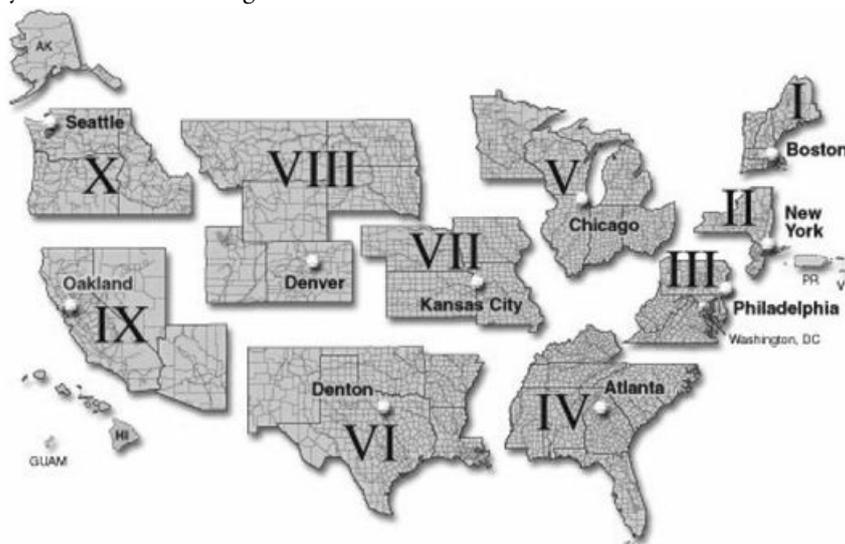
Region	State
I	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
II	New Jersey, New York, Puerto Rico, Virgin Islands
III	Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia
IV	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee
V	Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
VI	Arkansas, Louisiana, New Mexico, Texas, Oklahoma
VII	Iowa, Kansas, Missouri, Nebraska
VIII	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming
IX	Arizona, California, Hawaii, Nevada, and American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia
X	Alaska, Idaho, Oregon, Washington State

Source: Federal Emergency Management Agency, "Regional Operations," www.fema.gov/regional-operations (accessed December 11, 2013).

The Impact of 9/11 on Federal-State Relations

The attacks of September 11, 2001, had profound and surprising effects on FEMA federal-state relations. Under ensuing laws enacted for homeland security FEMA both suffered and prospered. DHS, whose doors opened in early 2003, was a major national policy response to the 9/11 attacks on the United States. It poured twenty-two federal agencies (one of them FEMA) into a new department that would incorporate about 180,000 federal workers. Many of these federal organizations had vastly more personnel and much larger budgets than did FEMA.[24] When FEMA was plunged into a sea of larger and more politically influential federal agencies, it suffered and so did its relations with states.

The federal government recruited state and local governments into the war on terror.[25] This may have been done because the first official emergency responders to almost every disaster are state and local emergency responders. This was especially so on 9/11 when emergency responders, most particularly firefighters and police officers, turned out to confront explosive jetliner impacts at New York's World Trade Center, at the Pentagon in Arlington, Virginia, and at Shanksville, Pennsylvania. In the United States there are about 2.2 million professional and volunteer fire service people and some 800,000 state and local police, as well as a huge number and assortment of physicians, nurses, and other emergency medical personnel. This intergovernmental integration was to be accomplished through massive federal, state, and local planning efforts, through information sharing, and through a profusion of heavily funded antiterrorism programs, a fraction of which involve FEMA.

In theory, many of the war on terror initiatives should have worked to the advantage of FEMA, in part because FEMA was one of the few DHS "legacy agencies" to have worked closely and often with governors and local leaders and with state and local emergency managers—many of the latter experienced in law enforcement, firefighting, emergency medicine, and public works. However, the DHS rush to yoke and refashion all of its component organizations into a massive antiterrorism assemblage had the effect of stripping FEMA of some of its most capable people. Many FEMA senior officials were reassigned to other posts in DHS, and many of these posts had little to do with emergency management.

The reorganization failed to fully consider the varied legally mandated nonterrorism missions of many of these agencies. Such mistakes are not without precedent. Many presidential administrations and Congresses have had a penchant for meeting new acute policy needs by re-tasking and realigning federal administrative entities. Policymakers give the impression that a new problem, need, or threat has been addressed but at "little or no additional cost" to the national taxpayer.[26] This tactic also supplies the public reassurance that the federal workforce will not actually have to grow in order to meet the challenge. Among the implications of this ploy are added work burdens for federal employees and an increase in government contracting to help meet new and old needs at the same time.

Before 9/11, federal and state emergency managers bonded through thinly funded "between disaster" federal grant programs and through their occasional, or sometimes regular, work on presidentially declared major disasters and emergencies (where federal funding and other aid was often substantial). After 9/11, many states were heavily tempted to form state homeland security departments. These organizations typically competed for staff and funding with state emergency management offices and other state-level organizations. The National Guard is the umbrella organization for emergency management in twenty-six states, and on account of this, emergency management has long been dominated by military approaches in many of these states. Consequently, many of these states were somewhat better prepared for military-oriented federal homeland security than were states whose emergency managers worked outside the National Guard– dominant model. Nonetheless, the promise of massive federal grants, many far eclipsing the between-disaster funding the federal government had offered in the past, for a period of years impelled governors and state legislatures to marginalize or subsume state emergency management and in turn prioritize state homeland security. Declines in federal funding of programs supporting state and local homeland security seemed to occur each federal fiscal year, such that today the inducement of federal homeland security funding is not the temptation it once was for states and local governments.

The absorption of FEMA into DHS in 2003 meant that the small, previously independent, federal agency had to find its place in a new department populated by many larger, as well as smaller, organizations—each of these with their own supportive political interests and clientele groups. FEMA also had to defend itself in bureaucratic "turf wars" with these sister DHS organizations. From 2003 to 2005, FEMA under DHS lost much of its jurisdiction over mitigation and recovery disaster management functions. However, the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006 ironically proved to be a godsend for FEMA. The 2006 law, and the assent of Presidents George W. Bush and Barack Obama, allowed FEMA to reconstitute itself. Several parts of its lost jurisdiction and staff were returned to the agency.

How Things Work: Revisiting who gets what under a Presidential Declaration

What can states and localities expect in the way of federal disaster relief? "The Stafford Act designates the universe of eligible applicants"[27] (e.g., states, and local governments, owners of certain private nonprofit facilities, individuals, families). However, not all persons or entities affected by a disaster are guaranteed federal disaster assistance when the president issues a declaration.

FEMA officials must recommend the categories of assistance to be made available before the president decides whether to issue a major disaster or emergency declaration. If any president decides to issue an approval, he or she may heed FEMA advice regarding aid categories or the president may add or deny FEMA suggested aid categories, although this author has no evidence that any president has denied a FEMA suggested aid category but issued an approval anyway. However, presidential declarations are sometimes issued which deny governors one or more categories of assistance, but which approve others.[28] Persons and organizations (including state and local governments) must make application to FEMA and other federal agencies for certain aid made available in the approved categories.

It is the job of FEMA and other federal agencies to ascertain that the applicant is eligible for the categorical aid for which they have applied. FEMA and other federal agencies accepting and processing applicant requests must determine that these requests are valid. FEMA, like many federal agencies tasked with issuing federal assistance on an expedited basis, is challenged to process applications as quickly as possible but at the same time authenticate claims made so as not to issue funds to undeserving applicants or to applicants making fraudulent claims. Obviously, application isnot necessary when FEMA and other federal agencies furnish directly, or through voluntary organizations or contractors, food, water, clothing, medicines, first aid, emergency transport, and other services or in-kind commodities directly to disaster victims.

For example, a family with adequate insurance and alternative housing options might not be considered eligible to receive some forms of FEMA financial aid. A unit of local government that suffers damages to some of its public facilities or infrastructure, but damage judged by FEMA officials to be insufficient under FEMA regulations and guidelines, might not receive federal funds to help subsidize rebuilding of those facilities and infrastructure. Certain nonprofit organizations (e.g., owners or operators of educational or nonemergency health care facilities) may have to rely on Small Business Administration loans, not FEMA Stafford Act grants, to restore services."[29]

Under major disaster assistance the president is authorized to direct that the following types of federal disaster assistance be provided:

- general federal assistance for technical and advisory aid and support to state and local governments to facilitate the distribution of consumable supplies
- essential assistance from federal agencies to distribute aid to victims through state and local governments and voluntary organizations, perform life- and property-saving assistance, clear debris from roadways, and use resources of the U.S. Department of Defense (DOD) before a major disaster or emergency declaration is issued
- hazard mitigation grants to reduce risks and damages that might occur in future disasters
- federal facilities repair and reconstruction
- repair, restoration, and replacement of damaged facilities owned by state and local governments, as well as private nonprofit facilities that provide essential services, or contributions for other facilities or hazard mitigation measures in lieu of repairing or restoring damaged facilities
- debris removal through the use of federal resources or through grants to state or local governments or owners of private nonprofit facilities
- individual and household assistance, including financial grants to rent alternative housing, direct assistance through temporary housing units (mobile homes), limited financial assistance for housing repairs and replacement, and financial assistance for uninsured medical, dental, funeral, personal property, transportation, and other expenses
- unemployment assistance to individuals unemployed as a result of the major disaster, for up to twenty-six weeks, as long as they are not entitled to other unemployment compensation or credits
- food coupons and food distribution for low-income households unable to purchase nutritious food
- food commodities for emergency mass feeding
- legal services for low-income individuals
- crisis counseling assistance and training grants for state and local governments or private mental health organizations to provide associated services or to train disaster workers.[30]

Emergency declaration assistance to state and local governments usually makes available fewer types of assistance and less funding than major disaster declarations do. The types of assistance authorized to be provided under an emergency declaration include the following:

- activities to support state and local emergency assistance
- coordination of disaster relief provided by federal and nonfederal organizations
- technical and advisory assistance to state and local governments
- emergency assistance through federal agencies
- debris removal through grants to state and local governments
- grants to individuals and households for temporary housing and uninsured personal needs
- distribution of medicine, food, and consumables[31]

The declaration process for emergencies is similar to that used for major disasters, but the criteria (based on the definition of

"emergency") are less specific.[32]

Memorandums of Understanding

Over its history, FEMA worked out new MOUs with each respective state emergency management agency. At the same time the agency endeavored to reduce the administrative burden it imposed on state programs and officials. For example, the Clinton FEMA routinely dispatched a representative to the staff of any governor whose state faced imminent disaster or whose state had experienced a major disaster. This was an attempt to smooth out FEMA-state relations and to assure coordination and cooperation in their intergovernmental activities. This practice continues today.

Officials of various government agencies usually negotiate and abide by MOUs. Unless approved through a formal rulemaking process as a regulation, they usually do not have the force of law behind them and stand as voluntary agreements.

An example of an MOU might be the case of California's Santa Clara County. There, "each municipality in the county agreed to engage in planning and training together in normal periods and to exchange information and provide resources in the event of disaster," although each provides for its own routine emergency services.[33]

Mutual Aid Agreements

Mutual aid agreements are usually mandated in law and negotiated as legal contracts. Mutual aid is a prearranged agreement, which may or may not have a financial component, to provide essential resources when local resources are inadequate to meet the needs of a disaster.[34]

Agencies may draw up agreements for reciprocal assistance under certain conditions or may set out contingent acquisition agreements between providers, vendors, and contractors. California and Florida have elaborate mutual aid agreements and systems among their state and local governments. The Emergency Management Assistance Compact (EMAC) (discussed later in this chapter) provides for state-to-statemutual aid.[35]

An example of a mutual aid agreement might be a local multiagency plan regarding how the residents of a nursing home are to be evacuated during an emergency. Consider this example:

> To ensure coordination among nursing homes, the committee provided mutual aid agreements to evacuating and hosting nursing homes, to be completed and included in each nursing home's disaster plan. These agreements outlined understandings between facilities operators with respect to transfer of patients and medical information, transportation costs, and so on.[36]

An agreement, however expressed, identifies which agency controls certain resources in the field and how and when they may be reassigned. Agreements help create working relationships between agencies and governments and may facilitate trust. Mutual aid agreements are common both in conventional emergency management and in homeland security matters (see the "History's Lessons" box).

State-to-State Relations and Interstate Assistance Compacts

On October 9, 1996, Congress approved the EMAC initiated by the Southern Governor's Association. EMAC was an agreement between fourteen states and territories made during 1995 and 1996 that committed them, through their respective governors, to cooperate in planning for state-to-state extension of emergency management help. The compact was open to any state or territory that chose to join, and today all the states belong to EMAC. FEMA testified in favor of EMAC before Congress and is a participant endorser of the compact. FEMA, however, decides funding of EMAC operations on a case-by-case basis.

The National Emergency Management Association (NEMA), an organization representing the interests of state emergency managers, through its Emergency Management Assistance Committee, moved the compact forward. EMAC represents a strong collective effort of the states to facilitate state-to-state mutual aid when major disasters and emergencies take place. In general terms, a compact represents an important intergovernmental agreement and it also indicates how political authorities provide consent for, and legitimacy to, such arrangements.

Pre-disaster Preparedness and Response Agreements

Emergency management in the United States has evolved into a complex and, since 9/11, federally dominated latticework of preparedness and response agreements. The original Federal Response Plan (FRP) that emerged in the early 1990s arrayed a set of emergency support functions (ESFs); various federal agencies were expected either to lead the coordination of these functions or to serve within them.[37] The system of ESFs continues to apply today under the NRF.

ESFs and other components of the NRF and NIMS (both discussed more fully later in the chapter) constitute pre-disaster preparedness and response agreements. Table 6-1 presents ESFs contained in the NRP—and since December 2007—in the NRF. The original FRP, as the title connotes, involved only federal agencies and the American Red Cross. Owing to the 9/11 terror attacks and ensuing federal laws and reorganizations, states and local governments are today integral participants in the NRF.

It is one thing to study U.S. government layer by layer, although some question whether the layers are as distinct as they seem.[38] It is another matter to consider how governments function when they must interact. Intergovernmental relations have both vertical and horizontal features. As shown in this chapter, when states fashion disaster mutual aid agreements and interstate disaster assistance compacts (although interstate compacts require congressional approval in law), they operate on a horizontal line. When federal, state, and local disaster agency officials establish pre-disaster preparedness and response agreements to facilitate the coordination of their respective agencies during future disasters, they do so along a vertical line. The war on terror has implications on the domestic front that affect intergovernmental relations on both dimensions.

The National Response Framework and the National Incident Management System

Homeland security policymakers have engaged in massive government planning efforts aimed fundamentally at a broad pool of federal, state, and local disaster responders. Since 9/11, it has largely been the president and federal agency officials who have steered homeland security policy. Congress has provided them new authority and regular infusions of funding for purposes set forth in law and policy. Homeland security policy manifests itself as a colossal intergovernmental, multiagency, multi-mission enterprise fueled by widely distributed, but often highly conditional, federal program grants to state and local governments. Planning in homeland security is more than simply reorganization or realignment of existing functions; it is a formal embodiment of the federal government's official response to the terror attacks of September 11, 2001.

History's Lessons: The Bridge to Gretna Incident as a Failure of Intergovernmental Disaster Management?

A controversial and regrettable incident took place on the bridge to Gretna from New Orleans several days after Hurricane Katrina had collapsed levees, flooded neighborhoods to the rooftops, and sent thousands seeking higher ground. Here is an extracted account of the event taken from a CBS News *60 Minutes* written account regarding correspondent Ed Bradley's investigation of the incident in 2005 and from Douglas Brinkley's 2006 book, *The Great Deluge*.

The incident involved people who sought to escape New Orleans shortly after Hurricane Katrina by trying to walk over a bridge out of New Orleans into Gretna, Louisiana. Since most of the police officers were white and most of the evacuees were black, the incident quickly took on racial overtones. Many wondered why, under any circumstances, people who were only trying to walk out of a devastated city would be prevented from reaching relative safety. The bridge where the incident took place is called the Crescent City Connection and it links the city of New Orleans with the city of Gretna on the west bank of the Mississippi River.[39]

Wednesday, three days after Katrina had struck, thousands of people started to walk across the bridge. Some 6,000 would eventually be put on buses. The exodus continued the next day when a group of tourists who had been staying in the French Quarter started heading in the direction of the bridge to Gretna. Investigators at *60 Minutes* found eight people who were on the bridge that day, among them Cathey Golden, Larry Bradshaw, and Lorry Beth Slonsky.[40] As they left their hotel they were told that buses awaited them on the far side of the bridge. With that assurance, they joined hundreds of other people, most of them African Americans and residents of New Orleans, and walked to the bridge to Gretna.[41] But when the group tried to cross the bridge, they were met by a line of armed Gretna policemen who fired shotguns over their heads. Those police told them Gretna was closed and turned them back.[42]

Golden said that when her group reached the police line, they were told there were no buses, and they were stopped with a shotgun blast. Also present was Shauron Holloman who also saw police officers fire their guns. "We were close enough to them. They'd rack their shotguns and let off a warning shot."[43] Bradshaw, who was at the front of the group, said he tried to get an explanation as to why they were being turned back. He said, "The only two explanations we ever received were 'We're not going to have any Superdomes over here,' and, 'this is not New Orleans.'"[44] Bradshaw commented, "To me, that was code language or code words for, 'We're not having black people coming into our neighborhood.'"

With nowhere to go, the group set up a makeshift camp in the middle of the highway on the bridge; they would try to cross again the next day. But then a Gretna police vehicle drove up. "He sped down in his cruiser and over the loudspeaker he just continuously said, 'Get the f*** off the bridge,'" according to a male eyewitness who spoke with correspondent Ed Bradley. The individual added that the officer pointed his gun at some people.[45] Soon after, a helicopter dropped close to the encampment and its downdraft blew things everywhere, forcing the evacuees off the bridge. When the eyewitness was asked why he thought they were turned away he answered, "I think because the group was 95 percent African American."[46]

The Counterargument

Gretna mayor Ronnie Harris felt strongly that the Gretna police department's actions on the bridge had nothing to do with race and had been greatly misunderstood. On the *60 Minutes* program, he commented, "Our community is one that understands compassion, one that understands that we have to give where we can. But when there is none, you have to take care of your own population first. And that is what we were faced with."[47]

Gretna is a middle-class suburb of 17,500 that is mostly white but that has a substantial black minority comprising 35 percent of the population. According to Mayor Harris, from "day one" after the hurricane, Gretna was in no position to help outsiders. He said, "The city of Gretna was completely on its own. Our entire services were disrupted. No city services. No electricity. We had no shelter. We had no medical services. We were hit by a category four hurricane. What were people expecting us to do?" Harris said he saw brief reports of the looting in New Orleans. "Quite frankly, I was embarrassed to see a free-for-all of not taking food and water but goods and items. Vandalism. Civil unrest. Civil disobedience. And it sickened me." The mayor's image of New Orleans came from media reports that emphasized chaos, looting and violence.[48]

"So, this environment of police officers being shot, citizens lying dead in the street, images of looting going on in the city of New Orleans made me realize that our community was in a crisis of far greater proportion than just of the hurricane," Harris exclaimed. His concern increased on Wednesday when thousands of people from New Orleans, mostly desperate poor African Americans, started walking across the bridge towards Gretna.[49]

Mayor Harris explained, "It started as a trickle, then it began quite heavily. From our estimates, between five thousand and six thousand people amassed on the west bank of the river. Now, that's our side of the river, the Gretna side."[50] The number of people fleeing the city was so large that the Gretna police commandeered transportation to bus them out of town. Over the next twenty-four hours, the police say they bused 6,000 evacuees from New Orleans. At the same time, police were on guard against reports of looting and stolen guns. "All of this was crashing down on all of us who were in charge, had to make decisions in a crisis mode," says Harris.[51] Brinkley wrote that the mayor and his chief of police "seemed to resent the fact that no one at City Hall in New Orleans had even tried to coordinate the movement of people with them."[52]

What led to the police chief's decision to seal off Gretna? "Something had to be done," says Harris. The mayor stated that it was the police chief's decision, a decision that he supported "wholeheartedly." Arthur Lawson, Gretna's chief of police was reported to have said, "We had to make a decision because we did not have the wherewithal to continue and to evacuate thousands and thousands of more people." He added, "Our job was to secure our city. We did our best to evacuate those that came over, but we could not continue to evacuate the entire city of New Orleans."[53]

Mayor Harris said he sealed off the city because he wanted to protect the lives of Gretna's residents. He remarked, "You had to be there to understand and witness total chaos, total mayhem, and the lack of information." Harris defended against accusations of racism by claiming that "everyone" was turned around, including the elderly and children. Harris declared, "What we did was seal that location off just like a dead end, because there was no safety or security available to wherever they were going. It did not exist. Was not there."[54]

Gretna chief of police Arthur Lawson had said: "We had no more to offer here than they did in New Orleans. We did not have food. We did not have water. We did not have shelters here." Evacuee Bradshaw's response: "We weren't asking for food, water or shelter. We were asking for the ability to walk out of New Orleans." Lawson insisted, "We did secure our community. I do not apologize for shutting the bridge down. You know my job and responsibility to this community is to make sure that it's safe, the people and their property are safe in this community." People in Gretna were not apologizing either. Signs thanking the police chief and his department were displayed in many of Gretna's front yards for a time. And the city council unanimously passed a resolution saying, "Allowing individuals to enter the city posed an unacceptable risk to the safety of the citizens of Gretna." The people of Gretna seem to be saying that there's a limit to compassion, that there is only so much you can do in circumstances like this to help people.[55]

Observations

One set of conclusions one might draw about this incident could begin with the question, how could a local government deny people in dire conditions the chance to evacuate a flood zone and a city that had "shoot-to-kill" nighttime curfew orders? Turning these evacuees away seems inexcusable, despite the insistence of Gretna authorities that the action was necessary.

Because many of the evacuees were African American, the incident appears to be an act of racism committed by local authorities. Gretna, perhaps as other U.S. local governments, possesses legal authority to use local law enforcement to block the entry of unwanted people into their jurisdiction under certain circumstances. However, in many respects the Gretna bridge incident stands as a failure of American intergovernmental relations, a failure of emergency management, and a failure of civil rights law and policy.

Another set of conclusions might be that Gretna authorities were working under immense stress; Gretna itself had experienced traumatic effects and substantial damage from Katrina and its aftermath; for Gretna officials government-to-government information sharing about people fleeing New Orleans was grossly inadequate; and Gretna people were heavily influenced by television images of the pandemonium taking place on the opposite side of the bridge in flooded New Orleans. Brinkley disclosed that at the time of the incident, the Louisiana governor, Kathleen Blanco, had "ordered National Guardsmen to other bridges and points of exit around new Orleans in order to keep people from walking out."[56]

In February 2010, a federal judge dismissed a lawsuit over the police blockade that kept some Hurricane Katrina victims from crossing a bridge out of New Orleans in the storm's aftermath. U.S. District Judge Mary Ann Vial Lemmon ruled that closing the Crescent City Connection to pedestrians after the August 2005 hurricane didn't amount to an "unreasonable restraint of liberty." The judge dismissed Tracy and Dorothy Dickerson's civil rights claims against the city of Gretna; the city's police chief, Arthur Lawson; the Jefferson Parish Sheriff's Office; and Sheriff Newell Normand.[57]

"In the aftermath of Hurricane Katrina, New Orleans and the surrounding area suffered unprecedented damage that created difficult decisions regarding the safety of its inhabitants," Vial Lemmon wrote. "The restrictions on foot traffic across the bridge was one of many measures taken to address serious safety issues." About two months after the August 2005 storm, nearly 100 civil rights advocates marched over the Crescent City Connection to protest the police blockade that stopped pedestrians from crossing the span over the Mississippi River into suburban Jefferson Parish.

Regardless of the conclusion one reaches, the entire incident carries lessons and warnings for local and state authorities and their respective emergency managers about the proper treatment of people who are evacuees. How can all local governments, including Gretna's, prevent a recurrence of such incidents in future disasters?

Development of an NRP was mandated in the Homeland Security Act of 2002 and Homeland Security Presidential Directive-5 (HSPD-5). The basis for the NRP flowed from the FRP that had preceded it; however, as mentioned, the NRP was a "national" plan that would now include "state and local government," rather than exclusively federal organizations. The NRP was to embody a single, comprehensive national approach; advance coordination of structures and administrative mechanisms; provide for direction for incorporation of existing plans with emphasis on concurrent implementation of existing plans; and set forth a consistent approach to reporting incidents, providing assessments, and making recommendations to the president, the DHS secretary, and the Homeland Security Council.

The NRP (2004–2006) and the NRF (interim 2006, revised December 2007, and in place at the time of this writing) set forth a national template leaders may use to determine the appropriate level of federal involvement in response to domestic incidents. The goal of the plan was to harmonize intergovernmental and interagency incident management.

A basic premise of the NRF is that incidents need to be handled at the lowest governmental level possible. Reflecting its antiterrorism mission, DHS becomes involved through the routine reporting and monitoring of threats and incidents, and when notified of an incident or potential incident. Based on the severity, magnitude, complexity, and threat to homeland security posed by the incident, the president, the DHS secretary, and when appropriate the FEMA administrator, decide whether the incident warrants a response. DHS uses various organizations at its headquarters, region, and field levels to coordinate efforts and to provide support to responders on-scene, who themselves are using a system long used by local responders, the Incident Command System (ICS). Other federal agencies carry out their incident management and emergency response authorities within this overarching framework.

Table 6-1 Emergency Support Function Teams and Emergency Support Function Coordinators

Table 6-1 Emergency Support Function Teams and Emergency Support Function Coordinators

ESF #1—Transportation ESF Coordinator: Department of Transportation

- Federal and civil transportation support
- Transportation safety
- Restoration/recovery of transportation infrastructure
- Movement restrictions
- Damage and impact assessment

ESF #2—Communications ESF Coordinator: DHS (National Communications System)

- Coordination with telecommunications industry
- Restoration/repair and temporary provisioning of communications infrastructure
- Protection, restoration, and sustainment of national cyber and information technology resources
- Oversight of communications within the Federal incident management and response structures

ESF #3—Public Works and Engineering ESF Coordinator: Department of Defense (U.S. Corps of Army Engineers)

- Infrastructure protection and emergency repair
- Infrastructure restoration
- Engineering services, construction management
- Critical infrastructure liaison

ESF#4-Firefighting ESF Coordinator: Department of Agriculture (U.S. Forest Service)

- Firefighting activities on Federal lands
- Resource support to rural and urban firefighting operations

ESF #5—Emergency Management ESF Coordinator: DHS (FEMA)

- Coordination of incident management efforts and response efforts
- Issuance of mission assignments
- Resource and human capital
- Incident action planning
- Financial management

ESF #6—Mass Care, Emergency Assistance, l-lousing and l-luman Services ESF Coordinator: DHS (FEMA)

- Mass care
- Disaster housing
- Human services

ESF #7—Resource Support ESF Coordinator: General Services Administration

- Resource support (facility space, office equipment and supplies, contracting services, etc.)

ESF #8—Public Health and Medical Services ESF Coordinator: Department of Health and Human Services

- Public health
- Medical
- Mental health services

- Mortuary services

ESF #9—Search and Rescue ESF Coordinator: DHS (FEMA)

- Life-saving assistance
- Search and rescue operations

ESF #10—Oil and Hazardous Materials Response ESF Coordinator: Environmental Protection Agency

- Oil and hazardous materials (chemical, biological, radiological, etc.) response
- Environmental safety and short- and long-term cleanup

ESF #11—Agriculture and Natural Resources ESF Coordinator: Department of Agriculture

- Nutrition assistance
- Animal and plant disease and pest response
- Food safety and security
- Natural and cultural resources and historic properties protection
- Safety and well-being of pets

ESF#12-Energy ESF Coordinator: Department of Energy

- Energy infrastructure assessment, repair, and restoration
- Energy industry coordination
- Energy forecast

ESF #13—Public Safety and Security ESF Coordinator: Department of Justice

- Facility and resource security
- Security planning and technical and resource assistance
- Public safety and security support
- Support to access, traffic, and crowd control

ESF #14—Long-Term Community Recovery ESF Coordinator: DHS (FEMA)

- Social and economic community impact assessment
- Long-term community recovery assistance to states, local governments, and the private sector
- Mitigation analysis and program implementation

ESF #15-External Affairs ESF Coordinator: DHS

- Emergency public information and protective action guidance
- Media and community relations
- Congressional and international affairs
- Tribal and insular affairs

Source: Federal Emergency Management Agency, National Preparedness Resource Library, www.fema.gov/national-preparedness-resource-library (accessed December 12, 2013).

The NRF is composed of several layers, depicted in Figure 6-2. Most noticeable is the absence of FEMA in Figure 6-2, but it resides within DHS. Also, this being so, the FEMA administrator and FEMA officials themselves, would be participants in all of the locations where DHS is mentioned.

Implementation of the National Response Framework and the National Institute Management System

The NRP, and its successor, the NRF, was supposed to improve local capabilities and not diminish local ability to respond to more routine, localized emergencies. The federal, state, and local bonding element that emerged from HSPD-5, was NIMS. HSPD-5 states the following:

> Beginning in Fiscal Year 2005, Federal departments and agencies shall make adoption of the NIMS a requirement, to the extent permitted by law, for providing Federal preparedness assistance through grants, contracts, or other activities. The secretary shall develop standards and guidelines for determining whether a State or local entity has adopted the NIMS.[58]

Under the directive, federal agencies were required to adopt, conform to, and apply the NIMS.

State and local governments were not "preemptively" compelled to adopt and use the NIMS but were "encouraged" to work within the NIMS concept of operations. However, state and local officials understood that their prospects of winning many types of homeland security federal grants would be much improved if they agreed to join in and comply with the requirements of the NRP and the NIMS.

The NIMS was a product of the collaboration of DHS with state and local government officials and representatives.[59] Many in the group were from public safety organizations. The NIMS incorporated many existing emergency management "best practices" into a comprehensive national approach to domestic incident management, applicable at all jurisdictional levels and across all responder occupational fields. The aim of the NIMS was to help responders at all jurisdictional levels and across all disciplines to work together more effectively and efficiently.

A core component of the NIMS was the ICS, a standard, on-scene, all-hazards incident management system already in use by many firefighters, hazardous materials teams, rescuers, and emergency medical teams. DHS officials declared that the ICS would henceforth be the standard method for addressing all incidents.

Local emergency managers were expected to learn the ICS, to participate in ICS exercises, and to acquire various certifications under NIMS, NRP, and later NRF protocols. Many local officials had to devise new, or modify existing, mutual aid agreements to suit NRP and NIMS requirements. Many state and local emergency management organizations were expected to modify their standard operating procedures as well. The NRP was to overlay existing response systems. DHS added three new ESFs and made some modifications to other ones. Three new structures were added to the NRP as well—the Homeland Security Operations Center, the Joint Field Office, and the Interagency Incident Management Group—all federal entities.

Figure 6-2 Organization of the National Response Framework from a U.S. Department of Homeland Security Perspective
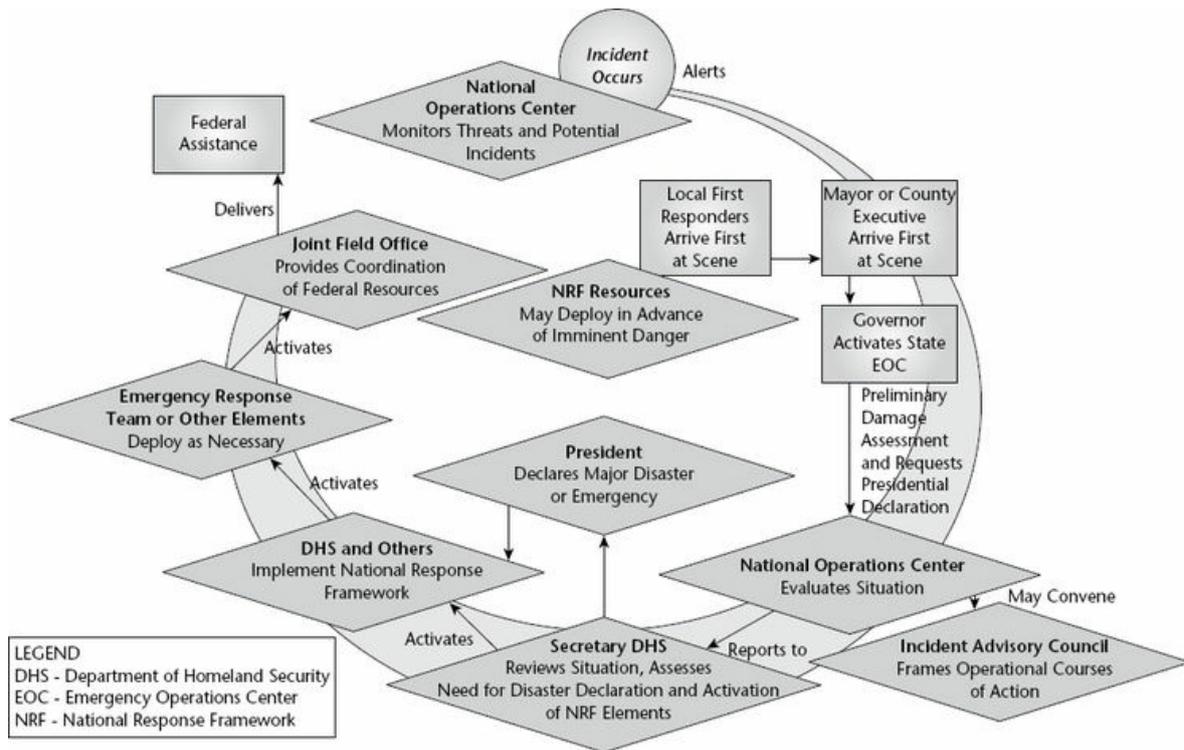
Source: Defense Procurement and Acquisition Policy, "Domestic Emergencies,"
www.acq.osd.mil/dpap/pacc/cc/domestic_emergencies.html (accessed March 1, 2014).

The NRP was issued as an unfunded mandate. States were expected to use a portion of the annual Emergency Management Performance Grant (EMPG) funds they received from FEMA to subsidize both state and local costs associated with meeting NRP and NIMS requirements. At the outset, the (now defunct) DHS Office of Domestic Preparedness and FEMA Emergency Management Institute (still in operation) were to provide training, educational materials, and practice exercise opportunities. The institute developed an online independent study course to help emergency managers and others gain familiarity with the NRP, and today its successor the NRF.

The NIMS has a core set of doctrines, principles, terminology, and organizational processes. It is supposed to be based on a balance between flexibility and standardization. The recommendations of the National Commission on Terrorist Attacks upon the United States further highlight the importance of the ICS.[60] The commission's report recommends national adoption of the ICS to enhance command, control, and communications capabilities.

Before the NIMS launch year, fire and police departments of some cities had already worked together using the ICS for years. In other municipalities, only the fire department used the ICS. Although law enforcement, public works, and public health officials were aware of the concept, many of these officials regarded the ICS as a fire service system. HSPD-5 required state and local adoption of the DHS-approved NIMS definition of the ICS as a condition for receiving federal preparedness funding. According to DHS officials, although the ICS was first pioneered by the fire service, it was and still is, at its heart, a management system designed to integrate resources so as to effectively attack a common problem.[61]

NIMS is regularly revised, but in 2008 it was said to provide the following:

> A consistent, nationwide template to enable federal, state, tribal, and local governments; nongovernmental organizations (NGOs); and the private sector to work together to prevent, protect against, respond to, and recover from the effects of incidents, regardless of cause, size, location, or complexity.[62]

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DHS officials attached great significance to the NIMS. They envisioned that the NIMS and the ICS would be necessary to address future terror attacks of the 9/11 type or scale. For them it was imperative that all responding agencies be able to interact and work together. The ICS component of the NIMS was supposed to make this possible. Not only would every state and local government be expected to establish an ICS-based system of emergency or disaster response, but they were expected to stay up to date and in conformity with the DHS-approved version of the ICS.[63]

Figure 6-3 is a chart of the ICS structure. The ICS structure and response system has become standard in countless fire departments, police emergency operations, and emergency management systems across the nation. Many thousands of emergency responders in the United States not only know the ICS but use it to practice, exercise, and train frequently.

The NIMS contains a Joint Field Office component, depicted in Figure 6-4. Figure 6-5 graphically presents the federal incident planning structure under the NIMS. Also see the "How Things Work" box for key concepts of NIMS.

Figure 6-7 is a depiction of how NIMS is organized from the incident command level to the emergency operation center level to the multiagency coordination level.

More broadly, the push toward universal adoption of the NIMS and the ICS reflects the dubious assumption that once a consistent management structure is adopted, preparedness and response effectiveness will automatically improve. Such an assumption ignores many other factors that contribute to effective disaster management, such as ongoing contacts among crisis-relevant agencies during normal times, common understandings of community vulnerability and the likely consequences of extreme events, realistic training and exercises, and sound public education programs.[64]

Figure 6-3 Incident Command Structure/National Incident Management System Structure
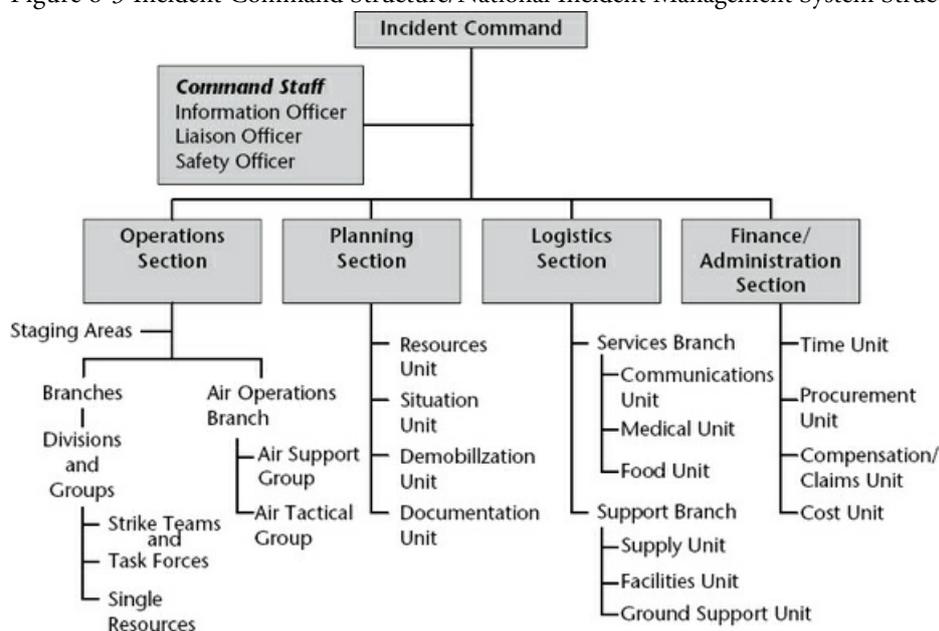
Source: Bill Ricker, "NIMS for Field Day Planning," *FD2008,* http://fd.ema.arrl.org/FD_ICS.html (accessed December 12, 2013).

One highly experienced emergency manager puts it this way:

While NIMS is based on the highly regarded Incident Command System, ICS is primarily a field

operating system that is useful for hierarchical paramilitary organizations. In other words, it works for fire, police, and emergency medical services. NIMS fails to take into account, however, the qualitative differences that emerge as one approaches crises of increasing complexity that must be managed by non-hierarchical organizations.

The growing emphasis on terrorism readiness and ICS principles has led to a concomitant emphasis on "first responder" agencies and personnel. In current homeland security parlance, the term "first responder" refers to uniformed personnel (fire, police, and emergency services personnel) that arrive at the scene of a disaster. Missing from this discourse is a recognition that, as numerous studies reveal, ordinary citizens are the true "first responders" in all disasters.

Figure 6-4 Joint Field Office
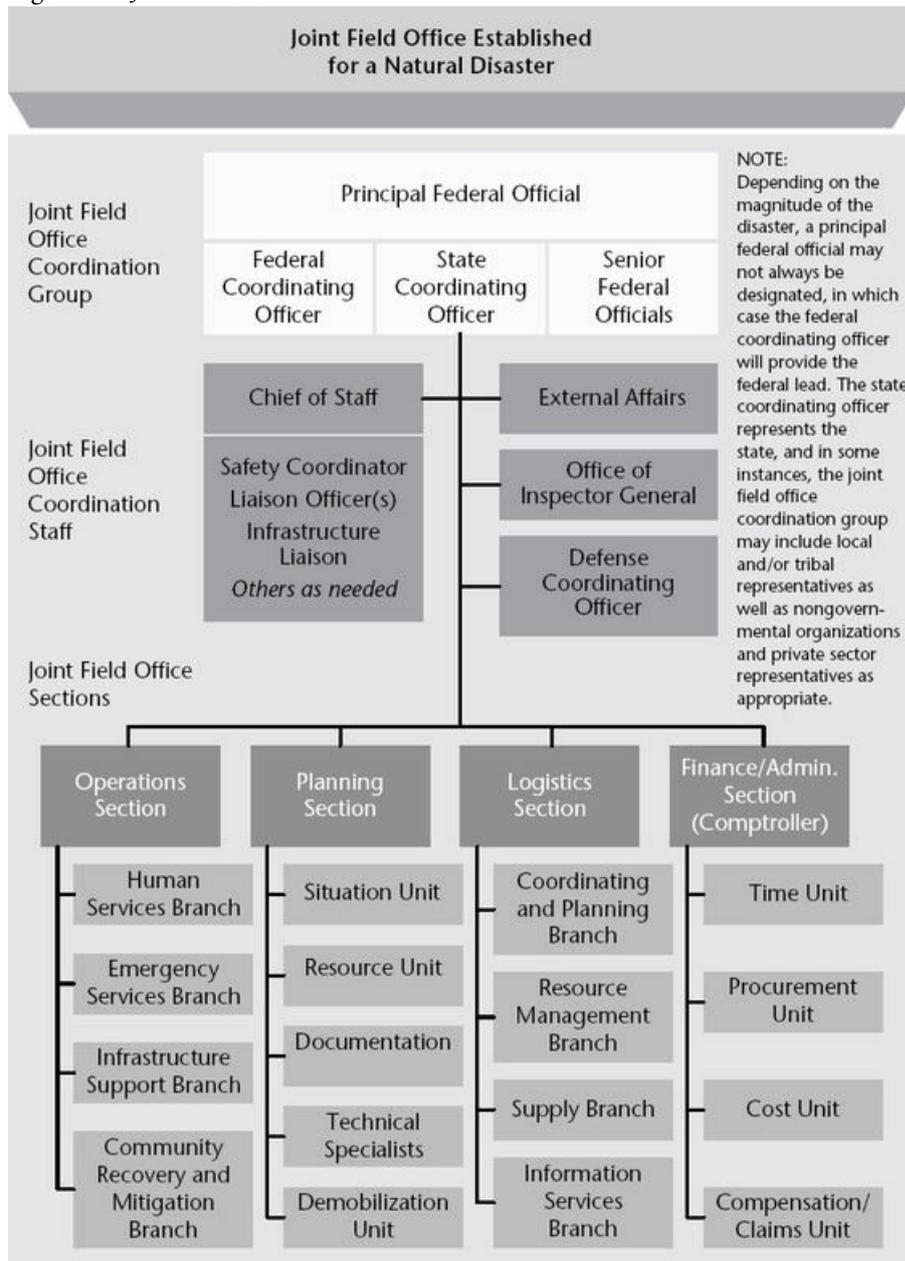
Source: U.S. Army Corps of Engineers, "Joint Field Office," http://usacac.army.mil/cac2/call/docs/11-07/files/Fig_3-5.jpg (accessed December 11, 2013).

Figure 6-5 Incident Command System Structure
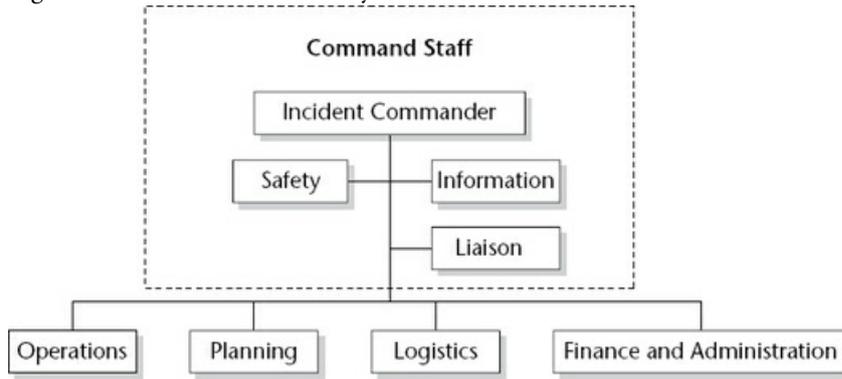
Source: Bing Images, "National Incident Management Systems," www.bing.com/images/search?q=National+Incident+Management+System&Form=R5FD0#view=detail&id=52D69AFBD7DED9D9904E5D (accessed December 11, 2013).

> For example, in Homeland Security Presidential Directive-8 (HSPD-8), a mere two sentences are devoted to the topic of citizen participation in preparedness activities. These new policies and programs may leave vast reserves of emergent talent and capability untapped in future extreme events.[65]

Many post-9/11 investigations have highlighted problems associated with "stovepiping" or the tendency for organizations and agencies to closely guard information, carry out their own specialized activities in isolation from one another, and resist efforts to encourage cross-agency collaboration.[66] Indeed, DHS itself was created in order to overcome stovepipes, better integrate disparate agencies and programs, and improve information sharing and cooperation. However, many homeland security initiatives have created new stove-pipes, owing to the effects of organizational turf wars and to the imposition of state secrecy requirements in realms that did not have them before.

An economics professor offers this illuminating observation:

> One must remember that all disasters are local and few events ever rise to the level of national significance. Similarly, when communities respond to requests for help, they provide temporary excess capacity—that amount of help available at the time of the event for a specific time. Perhaps most significant is the fact that capacities in communities ebb and flow based on funding, conditions, preferences, and demographic changes. These capacities are not finite and fixed. Federal government officials would be well served to remember that most events are local, focused, and discrete, and any response builds from the bottom up to include support from other jurisdictions horizontally and from different levels of government vertically.[67]

How Things Work: Key Concepts of the National Incident Management System

The NIMS is not easy to summarize in brief. However, it contains some core ideas and assumptions, which its authors define as concepts. Below is a rudimentary list of some of those ideas and assumptions.

NIMS provides a core set of common concepts, principles, terminology, and technologies in the following areas:

- *ICS.* Much of NIMS is built upon the ICS, which was developed by the federal, State and local wildland fire agencies during the 1970s. ICS is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance/administration. In some circumstances, intelligence and investigations may be added as a sixth functional area.
- *Multiagency coordination systems.* Examples of multiagency coordination systems include a county emergency operations center (EOC), a state intelligence fusion center, the DHS National Operations Center, the DHS/FEMA National Response Coordination Center, the Department of Justice/Federal Bureau of Investigation (FBI) Strategic Information and Operations Center, and the National Counterterrorism Center.
- *Unified command.* Unified command provides the basis from which multiple agencies can work together with a common objective of effectively managing an incident. Unified command ensures that regardless of the number of agencies or jurisdictions involved, all decisions will be based on mutually specified objectives.
- *Training.* Leaders and staff require initial training on incident management and incident response principles, as well as ongoing training to provide updates on current concepts and procedures.
- *Identification and management of resources.* Classifying types of resources is essential to ensure that multiple agencies can effectively communicate and provide resources during a crisis.
- *Situational awareness.* Situational awareness is the provision of timely and accurate information during an incident. Situational awareness is the lifeblood of the incident management and effective response operations. Without it, decisions will not be informed by information on the ground and actions will be inefficient and ineffective. Situational awareness requires continuous monitoring, verification and integration of key information needed to assess and respond effectively to threats, potential threats, disasters or emergencies.
- *Qualifications and certification.* Competent staff is a requirement for any leader managing an incident. During a crisis there will not be time to determine staff qualifications, if such information has not yet been compiled and available for review by leaders. To identify appropriate staff to support a leader during a crisis, qualifications based on training and expertise of staff should be pre-identified and evidenced by certification, if appropriate.

- *Collection, tracking and reporting of incident information.* Information today is transmitted instantly via the Internet and the 24/7 news channels. While timely information is valuable, it also can be overwhelming. For an effective response, we must leverage expertise and experience to identify what information is needed to support decision makers and be able to rapidly summarize and prioritize this information. Information must by gathered accurately at the scene and effectively communicated to those who need it. To be successful, clear lines of information flow and a common operating picture are essential.

Figure 6-6 Multiagency Coordination Systems in Brief
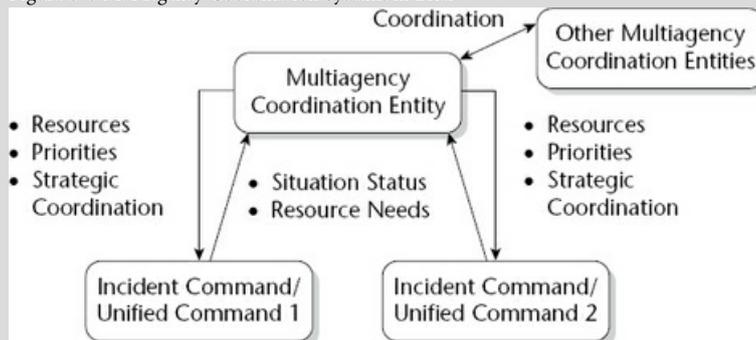
- *Crisis action planning.* Deliberative planning during non-incident periods should quickly transition to crisis action planning when an incident occurs. Crisis action planning is the process for rapidly adapting existing deliberative plan and procedures during an incident based on the actual circumstances of an event. Crisis action planning should also include the provision of decision tools for senior leaders to guide their decision making.
- *Exercises.* Consistent with the National Exercise Program, all stakeholders should regularly exercise their incident management and response capabilities and procedures to ensure that they are fully capable of executing their incident response responsibilities.

Sources: U.S. Department of Homeland Security, "Quick Reference Guide for the National Response Plan," May 22, 2006, version 4.0., 14–15, www.dhs.gov/xlibrary/assets/NRP_Quick_Reference_Guide_5-22-06.pdf.[68] The coordination graphic: Bing Images, "National Incident Management System," www.bing.com/images/search?q=700+National+Incident+Management+System&Form=IQFRDR#view=detail&id=2CEDAC32C5FB5A3B3221AA64DEDE7425421FD5A (accessed December 11, 2013).

Figure 6-7 National Incident Management System Framework—All Levels
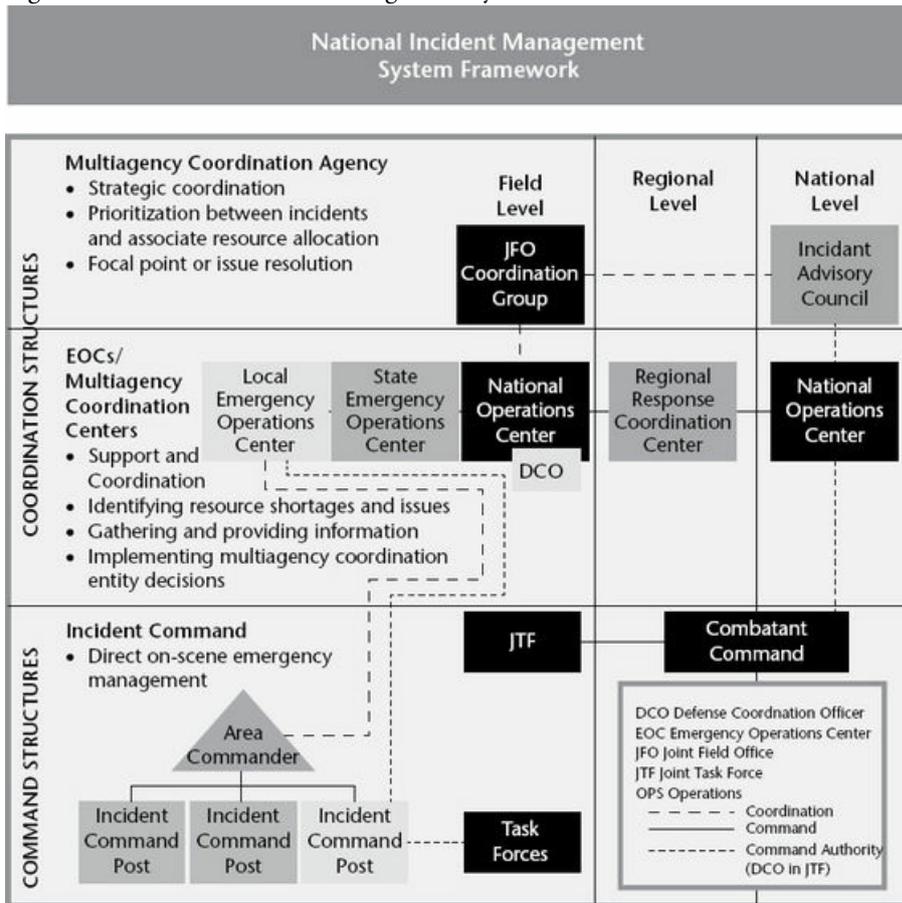
Source: Domestic Emergencies, "Index to Disaster Response Staff Officer's Handbook," Newsletter 11-07, December 2010, www.globalsecurity.org/military/library/report/call/call_11-07-ch3.htm (accessed March 1, 2014).

Intergovernmental Disaster Management Challenges

In any field of endeavor, the effectiveness of a human system depends upon how well those who are part of that system understand what must be carried out and what their own roles and responsibilities actually are. Certainly, this is true of emergency management. The potential for human suffering and devastation in a disaster makes it critical that emergency managers and related personnel understand fully the character of potential hazards, what can be done about these hazards through the application of emergency management principles and programs, and their role and responsibilities in the system of emergency management.

In the U.S. system of disaster management, a broad range of political and managerial transactions take place between and among governments of all levels. Each of the fifty states and each American common-wealth territory has an emergency management agency of some type. These agencies, like their local counterparts, are supposed to be well organized and to have emergency plans, facilities, and equipment. To become and remain eligible for federal emergency management financial assistance, each state must manage a state emergency management program that augments and facilitates local emergency management.

To make an intergovernmental system work, improvisation and flexibility must be part of the ethos of the system. Officials in this system must identify various emergency task domains, and they must reach a consensus about who is going to perform within each. Nevertheless, many disasters present unanticipated demands, so emergency managers must be able to improvise.

Intergovernmental relations in matters of disaster management are not always affable. For example, federal, state, and local officials are supposed to conduct a Preliminary Damage Assessment (PDA) after a disaster. These assessments help to determine whether the disaster is beyond the response and recovery capabilities of the state and local governments affected. A determination that the disaster has produced damage, or has created ongoing dangers, beyond the response and recovery capabilities of the affected governments serves to justify issuance of a presidential declaration of major disaster or emergency.[69] However, disputes sometimes arise over the matter of how extensive damage actually is and what is "clearly beyond" recovery capability and what is not. Sometimes these disputes must be resolved by the president himself through approval or rejection of a governor's request for a declaration of major disaster or emergency.

Some suspect that after many "disasters" intergovernmental interchanges embody a crying poor syndrome.[70]Local governments sustaining disaster losses and costs have every incentive to exaggerate their scales of damage in order to maximize outside state and federal post-disaster aid. If state governments shield their local governments from having to pay little or no money into the state-local matching share required in many federal disaster relief programs, these local governments have even greater incentive to detail every conceivable disaster loss eligible for state and federal assistance. Zero local matching share means that federal and state relief provide a 100 percent local recovery subsidy. So repairs to city hall would impose no costs on local taxpayers.[71]

States also have an incentive to maximize, if not exaggerate, their magnitudes of disaster loss. Ordinarily, each presidential declaration of major disaster or emergency conveys federal-state matching aid of seventy-five to twenty-five (see the "How Things Work" box). In other words, seventy-five cents of every dollar of state disaster loss is subsidized by federal assistance. When states share their matching burden with localities, the state government derives an even greater subsidy. Since the federal government carries the bulk of financial burden in paying for the public costs of presidentially declared emergencies and major disasters, it is no surprise that FEMA officials are often highly suspicious of state and local estimates of disaster loss.[72] They sometimes suspect state and local government officials of conspiring to maximize federal disaster dollars dispatched to their jurisdictions. Such behavior on the part of these officials exemplifies distributive politics, under which political actors seek resources in excess of their actual need.

Nonprofit Organizations and Volunteers

A great many nonprofit voluntary organizations are involved in disaster mitigation, preparedness, response, and recovery efforts. Disasters trigger an outpouring of individual contributions of money or in-kind donations central to the operation and sustenance of many of these bodies. Some volunteer-based organizations are spawned by disasters themselves. Sociologists refer to these as emergent organizations. Government emergency management agencies often interact with these organizations and do so for a variety of reasons. The dynamics of that interchange, the interdependence of public and private disaster management organizations, and the political positives and negatives of relying upon nonprofit voluntary organizational help will be addressed here.

How Things Work: A Short Return to Presidential Declarations

For all major disasters, and for emergencies that do not primarily involve federal responsibility and authority, governors of the affected states must request the presidential declaration after certifying that necessary action has been taken under state law; damage estimates have been made; state and local resources have been committed; and cost-sharing requirements of the statute will be met.[73]

The collection of information on damages involves a collaborative effort involving FEMA staff, state officials, and personnel from affected local governments. Teams of assessors conduct a PDA to estimate the degree of damage and potential costs resulting from the disaster. The assessment is broken down into categories (such as the number of homes damaged or destroyed and the number of public facilities damaged or destroyed) that correspond to the broad categories of disaster relief and assistance that FEMA provides through the individual assistance or public assistance programs authorized by the Stafford Act. Information in the PDAs is used to determine whether a declaration will be issued and, if one is issued, whether individual and public assistance programs will be provided to the areas (generally, counties, parishes, and independent cities) included in the declaration.

It is in these interchanges that political and managerial factors often come into play. Mayors press governors for more state and federal aid. A governor, lamenting the high costs of a disaster and the state matching share obligations they produce, sometimes receives permission to borrow from the federal government the money his or her state needs to pay its own match. At least one U.S. Government Accountability Office (GAO) report disclosed that states sometimes fail to repay all or most of the federal money they have borrowed to cover their matching share. In catastrophic disasters, governors sometimes succeed in securing from the president a higher federal match (100 percent for Florida after Hurricane Andrew in 1992; 90 percent for California after the Northridge earthquake in 1994; 90 percent for Louisiana, Mississippi, and Alabama after Hurricane Katrina in 2005). Such generous federal matching shares impel state and local loss estimators to identify every single dollar of eligible disaster cost.

FEMA sets forth criteria its own officials use to judge state and local eligibility for a declaration of major disaster, but as Chapter 4 documented, the decision to confer a declaration is the president's alone, and the president can freely use or disregard FEMA criteria.[74] Each year, FEMA issues a notice that identifies the threshold to be used as one factor to be considered in the determination of whether public assistance or individual assistance or both will be made available after a major disaster declaration has been issued.

By definition, a nonprofit voluntary organization is one that provides service to a community free of charge or for the minimal cost that is required to defray the cost of the service(s) furnished. Financial support for voluntary agencies is generally through donations, contracts, and grants. Private nonprofit organizations are legally characterized by holding the special nonprofit federal tax-exempt status. Many such organizations provide educational, social services, emergency, medical, rehabilitation, and temporary or permanent custodial care facilities (including those for the aged and disabled), or other facilities that produce essential services for the general public.

Nonprofit voluntary organizations, community service groups, and religious organizations that provide assistance in the aftermath of a disaster or an emergency are often referred to as voluntary agencies (VOLAGs). VOLAG involvement in disaster response and recovery has a long history in America. For example, in 1905, the U.S. Congress mandated that the American Red Cross do the following:

> [Continue and] carry on a system of national and international relief in time of peace and apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities, and to devise and carry on measures for preventing the same.[75]

Likewise, the Salvation Army, a recognized church, has been providing disaster relief assistance since 1899.

A great many not-for-profit and volunteer organizations in the United States have an interest in, and role to play in, emergency management. Organized volunteer resource groups come in a great variety of forms. Besides the American Red Cross and the Salvation Army there are Volunteers of America, the Mennonite Disaster Service, the Southern Baptist Convention, Catholic Charities, Episcopal Relief and Development, United Jewish Communities, Islamic Relief USA, Friends Disaster Service, Church World Services, Save the Children, to name a few. National Volunteer Organizations Active in Disaster (National VOAD), mentioned ahead, include many of these and a great many more.

States, localities, and NGOs respond to many disasters that do not involve federal assistance. These organizations

also play a vital role when federal authorities are involved in disaster work under a presidential disaster declaration. However, government emergency managers and those in voluntary assistance organizations do not necessarily share the same definition of disaster or emergency. Even voluntary organizations themselves use different emergency management terminology, follow different methods of budgeting and management, and have different perceptions of government's role in disaster management.

Secular nonprofit voluntary relief organizations have historically provided considerable disaster assistance to victims, particularly by distributing food, medical supplies, and temporary shelter. Many organized religions, and within them various churches, synagogues, mosques, and the like, have established organizations specifically dedicated to providing such assistance. A report issued by the National Academy of Public Administration after Hurricane Andrew noted that volunteer organizations, many nonprofit organizations, and private sector organizations participate in mitigation, preparedness, response, and recovery.[76] They regularly address incidents ranging from minor ones to catastrophes.

In preparedness, VOLAGs assist in developing disaster plans and in training disaster responders; they provide facilities and resources as well as community disaster education; and they join in drills, exercises, and simulations. In the response phase, VOLAGs furnish resources such as trained personnel, masses of untrained but instrumental helpers, and various facilities. In cooperation with local, state, and federal authorities, VOLAGs often provide the bulk of mass care services, sheltering, feeding, and clothing individuals and families; assisting high-risk, "gap group" clients; and, through an extended network of service organizations, helping to coordinate interests not generally involved in disaster response. Gap group clients are those who fall between the cracks of eligible government assistance; some are low income but not poor enough to qualify for government individual and household cash assistance, which is means tested. Some lack proper documentation, some cannot prove they live in the area of the disaster, others filled out their application for aid incorrectly, some cannot get through tele-registration to file a claim with FEMA, some have not be able to find local disaster service centers where they can make application, and so on. The point is that there are a host of reasons why people fall into unassisted gap groups. Government efforts to prevent fraudulent claims often have the effect of disqualifying people who are genuinely eligible but unable to factually document to FEMA satisfaction their request for help, often through no fault of their own.

In recovery operations, VOLAGs work in partnership with government and affected communities to identify and meet remaining long-term recovery needs of families and individuals. In mitigation, VOLAGs often advocate to elected and appointed officials sound land-use planning and zoning, as well as the adoption and implementation of appropriate building codes and standards aimed at protecting and safeguarding people and property from disaster. Information about what the public can do to safeguard their property is shared through community disaster education activities.

A growing trend is the cooperation and coordination of volunteer organizations that participate in disaster relief. At the national level is the National VOAD, a forum and assemblage of national, state, local, and umbrella organizations (see below) that have made preparation for all phases of the disaster cycle their collective priority. The group includes the American Red Cross and the Salvation Army. National VOAD grew out of the response to Hurricane Camille in 1969, when organizations that had been involved in providing resources and services to victims and communities affected by the disaster shared their mutual concern about their frequent duplication of services. Representatives of these organizations began to meet together on a regular basis. In those meetings participants learned about their respective activities, concerns, and frustrations, and they labored to prevent duplication and inefficiencies in their responses to future disasters.

National VOAD is a nonprofit, nonpartisan membership organization that serves as a forum in which organizations share knowledge and resources throughout the disaster cycle—preparation, response, recovery and mitigation—in order to help communities prepare for and recover from disasters. The National VOAD coalition includes over fifty national organizations, some faith-based nonprofit voluntary organizations, some community-based, and others secular NGOs. There are also fifty-five State/Territory VOAD groups, which represent Local/Regional VOAD groups and hundreds of other member organizations throughout the country.[77]

Also part of National VOAD are sixty-one distinct state-level umbrella groups working at the state, District of Columbia, or trust territory levels. These state-level VOAD groups help coordinate the work of many hundreds of smaller organizations. VOAD member organizations provide more effective disaster aid and less duplication in service by getting together before disasters strike. Once disasters occur, National VOAD or an affiliated state VOAD encourages members and other voluntary agencies to convene on site. This cooperative effort helps a wide variety of volunteers and organizations to work together in a crisis.

National VOAD serves member organizations in the following ways:

- *Communication:* disseminating information via electronic mechanisms, newsletters, directories, research and demonstration, case studies, and critiques
- *Cooperation:* creating a climate for cooperation at all levels (including grassroots)
- *Coordination:* coordinating policy among member organizations and serving as a liaison, advocate, and national voice
- *Education:* providing training and increasing awareness and preparedness in each organization
- *Leadership development:* giving volunteer leaders training and support so as to build effective State VOAD organizations
- *Convening mechanisms:* conducting seminars, special meetings, board meetings, regional conferences, training programs, and local conferences
- *Outreach:* encouraging the formation of, and furnishing guidance to, state and regional VOADs

National VOAD policy stipulates the following: "The role of a VOAD group is not to manage disaster response operations, but it is instead to coordinate planning and preparations in advance of disaster incidents and operations."

Volunteer Organizations in the Field

Most volunteer organizations are involved in immediate emergency response, such as mass care, which includes feeding, sheltering, clothing of victims, and the like. Some are involved in recovery activities, such as rebuilding, cleanup, and reconstituting community mental health. Many organizations provide the same or similar services. Problems of overlap or competition usually are avoided if the agencies coordinate and cooperate. VOLAGs must collectively agree to share the work by coordinating their limited resources so that as many agencies as possible are able to take part in the response and recovery effort. By sharing and cooperating, VOLAGs may share credit for the recovery of their communities and for promoting the community healing process. Sometimes VOLAGs argue with each other at the expense of the people they are trying to serve.

However, VOLAGs, by nature, compete for the donated dollar. This is not necessarily a problem unless during relief operations various VOLAGs are not provided an opportunity to serve or be publicly recognized for the help they provide. VOLAGs need a chance to demonstrate their abilities to both their supporters and to the community at large. Sometimes government public information officers report on the efforts of just a few VOLAGs without acknowledging the legitimate contributions of all VOLAGs engaged in a response or recovery operation. Such omissions can create rancor and misunderstanding. VOLAGs themselves need to draft cooperative, or joint, press releases to illustrate their collaborative efforts.

VOLAGs are private organizations with their own missions and responsibilities. Local VOLAGs often report to a parent organization whose headquarters are located outside of the disaster area. Sometimes an agency's national headquarters will support their local agency by sending in national leadership or a response team to assist the disaster relief effort. Conflicts sometimes arise when the national teams and the local response element do not coordinate, collaborate, cooperate, or communicate. Occasionally problems and awkwardness result when the national team makes a decision on behalf of its local affiliate without thinking about the long-term ramifications that decision might have on the agency after the national team returns home. Sometimes a national team fails to understand cultural, economic, and political sensitivities of the local community and acts in a way that induces the community to look unfavorably upon the local affiliate. This may undermine years of trust and good faith built up under conditions of normalcy before the disaster. It is important that parent organizations not jeopardize the credibility or funding base of local affiliates during a disaster response or recovery effort.

In addition to those nonprofit voluntary organizations outside of government, some voluntary organizations engaged in disaster response and emergency management are part of government. The Citizen Corps, which is an arm of U.S.A. Freedom Corps, invites people at the community level to volunteer. Citizen Corps councils working at the state and local level regularly receive federal funding used to promote training and education of community volunteers, in some ways helping them to respond to disasters or emergencies in their communities.[78] Moreover, the federal Corporation for National and Community Service administers and, through grants, funds AmeriCorps, Senior Corps, and Learn and Serve America. These three organizations engage in volunteer-based activity, a portion of which is directed to serving emergency management and homeland security purposes.[79] FEMA encourages development of Community Emergency Response Teams (CERTs). CERTs are proliferating across the United States. CERTs members are unpaid, voluntary workers who are invited to earn qualifications for various type of post-disaster relief specialization, including elemental search and rescue, first aid, shelter management, and more. This type of volunteer coproduction activity augments the pool of people available to help in times of disaster or emergency, increases the likelihood neighborhood responders will be more qualified to provide appropriate help after a disaster, and fosters popular support for local, state, and federal emergency management people and programs.

For many years FEMA could mobilize small armies of Disaster Service Workers, or later Disaster Assistance Employees. However, FEMA has transitioned to a system of temporary paid employees who are FEMA Reservists or who are hired as Incident Management CORE employees to be on call for disaster deployment for a two-year period. FEMA began advertising Incident Management CORE employee positions on June 26, 2013.[80] Incident management positions are two-year, full-time, exempted service appointments. The agency said this:

These CORE positions establish a new opportunity within the disaster workforce and successful candidates will be afforded the opportunity to be deployed for up to 300 days per year. The incumbents will serve as mid-level emergency managers at Joint Field Offices in support of disaster and emergency operations.

The intent is for Incident Management CORE personnel to maintain a regular state of readiness, for the purpose of responding to major events that are deemed critical by the agency. The intent of FEMA is to maintain a workforce that is ready to deploy and respond at all times to critical events. Though CORE people could be assigned anywhere across the United States, general management and oversight will be maintained geographically by each FEMA region (see the "How Things Work" box).[81]

Government Contractors and Disaster Management

When the federal government hires private businesses to perform specific jobs, the government becomes the customer. Ingrained in the customer-to-supplier relationship is the supplier's obligation to satisfy the customer. If the contracted business is to satisfy the government, the contracted task(s) must be completed in an efficient, effective, and equitable manner. Ordinarily, contracts are awarded through a competitive bidding process, but in emergency circumstances the federal government may award a firm contract if it is the only applicant, a form of sole source contracting. The federal government can also lump together many tasks into one, large contract and allow the winning contractor to subcontract distinct sections of the prime contract work to other businesses, again in the interest of speed. Because government agencies cannot fulfill every disaster management task, these agencies award contracts to businesses to handle specific tasks, to engage in certain types of activity, or to produce or supply some type of product or service.

The federal government is quite dependent on contractors, and this is especially so for DHS and FEMA. One argument in favor of using government contractors is that contractors have more flexibility and freedom to complete work, and often at less cost, than government does. A counterargument is that government contractors, as profit-maximizing businesses, have an incentive to minimally meet the terms of the contract, nothing more. Some government contractors have been accused of being unresponsive to taxpayers or have been prosecuted for fraud and corruption. Contractors are often rapacious in their effort to win government funding.

How Things Work: The Politics and Preferences of Volunteer Organizations

Government emergency management officials can never be sure how much post-disaster help voluntary organizations are able to provide. Often, voluntary organizations augment government assistance and do so admirably. However, sometimes voluntary organizations are overwhelmed by the scale of need they encounter. Clearly, many voluntary organizations were for weeks overwhelmed by the human needs created by Hurricane Andrew in south Florida in 1992 and by Hurricane Katrina in the Gulf Coast in 2005. Sometimes they are only modestly involved in offering assistance, and occasionally they choose not to respond to a disaster at all. Some organizations are reluctant to offer assistance if they have problems with those needing help. They may be highly reluctant to aid undocumented aliens, or corrections parolees, or HIV/AIDS victims, or people of religious faiths or cultures drastically different from their own.

The disaster assistance process is based on an interagency referral system. Referrals are made between VOLAGs, between governments, and between VOLAGs and governments. Government assistance supplements individual and family resources, and VOLAG assistance augments these resources and helps address unmet needs. VOLAG people serve communities after disasters. However, they also know that government programs often provide more assistance, and in recent years, with greater speed than most nonprofit and private organizations do after a disaster.

Moreover, VOLAGs must take into account that if they provide certain forms of financial assistance, that assistance may make the client ineligible to receive certain types of government disaster assistance. Ironically, by providing certain forms of aid too quickly, VOLAGs may decrease the total sum of government disaster assistance that might have flowed to the community. VOLAGs must reconcile their desire to respond and assist quickly in recovery efforts with the knowledge that more resources may be conserved if they wait for government to distribute its resources and only then offer help to meet the remaining needs of disaster clients. Perhaps most significant is how such organizations support and nurture disaster victims and their families. Yet, despite this historical and traditional role, it is not possible to measure accurately the amount of assistance provided through such voluntary efforts.

Another complicating factor is that disasters provide a major impetus for the solicitation of charitable contributions needed to administer these organizations and to fund their assistance programs. Many nonprofit assistance organizations derive income for their budgets from governments both before and after disasters. The federal government may provide reimbursement of some of the costs of relief provided by VOLAGs. However, law and policy dictate that FEMA cannot reimburse a VOLAG that proselytizes its religion in the course of dispensing relief assistance to disaster victims.

Voluntary organizations must generate positive publicity in order to reassure contributors that their donations are getting to where they are intended. However, voluntary organizations compete with each other for donors and donated dollars. Emergency managers must be aware of the possibility that competition among nonprofit organizations may complicate coordination of relief efforts. Certain organizations have strong political backing that they may bring to bear on disaster managers.

Nonprofit voluntary organizations enjoy a special tax status that exempts them from paying many federal, state, and local taxes and that provides their donors with a tax deduction for charitable dollar or in-kind donations. However, this special tax benefit limits these organizations from engaging in political activity, especially lobbying legislatures. Consequently, voluntary organizations appear not to be formally involved in public political issues.

However, they are very much involved informally in public and community issues that are part of the world of politics and policy. These organizations and their members are free to express their views and to publish recommendations on matters of public policy. They are less able to make campaign contributions or directly lobby the government for special benefits to their organizations.

On top of this, they often champion the causes of the general interests they represent (children, the elderly, the disabled, minorities [racial, ethnic, religious], women, the poor and homeless, victims of crime or abuse, victims of disaster, the seriously ill or those needing hospice care, ex-convicts, people suffering drug addictions or mental illness, health or social welfare clients, and the like). Consequently, by advocating government benefits for the interests they represent, they may gain from government programs indirectly.

Next is a short review of four very major federal contractors, each managing sizable FEMA contracts. They are selected as a sample. A great many other firms could have been included here, but in the interest of brevity only three are examined here.

Few corporations seem to dominate spheres of government contracting more than Halliburton does. Founded in 1919, Halliburton is one of the world's largest providers of products and services to the petroleum and energy industries.[82] Halliburton has many government contracts, and many of those are with the U.S. military. However, Halliburton has expanded its services into disaster relief.[83]

Booz Allen Hamilton, another corporation experienced in winning and completing government contracts, is a consulting firm that has expertise in decision support and technology applications. Booz Allen Hamilton serves the public sector in its information technology work, its national security work, and its services integration work.[84]

The firm is noted for its achievements in supporting projects involving water supply, highway construction, airports, housing, telecommunications, and other public improvements.[85]

Booz Allen Hamilton has engaged in a wide variety of government contracts relevant to emergency management.

Another government contractor, Bechtel, is a global engineering, construction, and project management company in existence for more than a century. Bechtel focuses on roads and rail systems, airports and seaports, environmental cleanup projects, telecommunications networks, and pipelines.[86] A company with more than 40,000 employees and forty offices, Bechtel has been a government contractor for such projects as Bay Area Rapid Transit, Europe's Channel Tunnel and Rail Link, the Boston Central Artery/Tunnel, Iraq reconstruction, and the Three Mile Island cleanup.[87]

Fourth and last, the Dewberry Company has a half century of experience providing expert contractor services in architecture, environmental services, geographic information systems (GIS), land development, and transportation. Dewberry claims that its government contract work has done much to advance the development of emergency management. Dewberry provides both pre-disaster and post-disaster assistance to federal, state, and local governments. Dewberry clients include DHS, FEMA, the U.S. Army Corps of Engineers (USACE), the U.S. Geological Survey (USGS), and more than thirty local government agencies. Dewberry's emergency management specialists have an average of twenty-six years of experience in the field. Dewberry has experience and expertise in all four phases of emergency management: preparedness, response, recovery, and mitigation.[88]

After Hurricane Katrina, FEMA hired Dewberry to help in disaster recovery. The firm dispatched engineers, specialists, and inspectors into the Gulf Coast region to perform a diverse range of tasks. For example, Dewberry was designated to lead the strike team asked to assess damage done to certain justice facilities. Working alongside state and local officials, Dewberry performed on-site assessments of police facilities, fire stations, and courthouses. Dewberry won contracts to provide technical assistance to municipalities seeking repair of their infrastructure. Dewberry holds contracts aimed at helping FEMA advance disaster mitigation and evaluate the performance of various structures in disaster circumstances.[89]

In 2006 FEMA awarded Dewberry a two-year contract to provide temporary housing assistance for future disaster victims. It has a $250 million cost ceiling.[90]

Observations on Government Contractors and Contracting

There has been a very significant increase in federal government contracting since 9/11, and this includes both the Barack Obama and George W. Bush years. A great many of these contracts have been awarded by DHS and FEMA. Is government becoming too dependent on government contractors? Is the process under which contracts are bid and awarded fair, legal, and appropriately monitored? Has the system of bidding and application become so complex, so burdened by crosscutting legal requirements, so time consumptive, so hobbled by reporting and auditing rules, so labor intensive, and so fickly affected by the whims of congressional funding that small companies cannot expect to be competitive in seeking and winning government contracts? Federal contract seeking in the disaster field has evolved into a giant casino-like system in which "high rollers" are overrepresented. Smaller firms increase their chances by combining with larger firms, often those possessing a strong lobbying presence in Washington, D.C. More than this, big firms accumulate federal contract acquisition and fulfillment experience over time, and combined with their massive economy of scale, they can afford to wait out the vicissitude, fecklessness, and politics of grant application, grant approval, and the eventual stream of government payments, and ultimately government auditing. This is one reason why several major defense contractors have carved out a place for themselves in federal contracting for disaster work, study, training, decision support, and the like.

It is often intriguing to explore the specific services government agencies have contracted out to businesses. These may range from speechwriting to development of drones to be used in post-disaster aerial damage surveys. Some contracted activities seem essential: removing massive debris; restocking public shelters; replacing totally destroyed public office buildings, repairing hospitals, highways, bridges, main railway corridors, major airports, under-river auto and train tunnels, high-tension power lines and electric substations, natural gas pipelines, fiber-optic or copper-based telecommunications infrastructure, and the like. Some contracted recovery spending appears questionable: fixing expensive public stadium scoreboards and public golf courses, repairing tourist railway lines, reimbursing some homeowner civic associations for snowplowing costs when these bodies set aside paltry sums for this purpose before the declared snow event, subsidization of local reconstruction that far exceeds the cost or market value of the original structure, and so on. There obviously are many tasks the government cannot perform alone, but clearly some tasks could be, and have in the past been, executed by the federal government. For many years FEMA relied on its own force of disaster assistance employees, who are in fact paid volunteers with needed expertise, to handle many disaster recovery duties. However, FEMA has contracted out a considerable portion of these disaster service worker duties to private businesses.[91]

Positive and Negative Aspects of Subcontracting

Most companies that win government contracts rarely do all the work on their own; instead, they subcontract work out to other companies. This has positive and negative consequences. A positive consequence is that smaller firms less capable of competing for prime federal contracts sometimes win business on the rebound via subcontracting. A negative consequence is that government oversight of contracted work becomes extremely difficult when layers of subcontractors are engaged. This practice makes it difficult to ensure accountability to the U.S. Treasury and national taxpayer. The practice also sometimes adds overhead charges such that the ultimate services and products provided are of less volume and of greater per unit cost than what the government expected when it awarded the contract. Waste and misuse become more difficult to ferret out.[92]

Another problem of government contracting is public transparency. It is extremely difficult if not impossible to find public records of FEMA awards to private contractors. There are many thousands of big, medium-sized, and small private contractors. They range from firms as large as IBM to local roofers, plumbers, small university centers, and individual consultants. Moreover, the contractors themselves have little incentive to reveal publicly the nature and dollar amounts of the government contracts they have won. Some contractors are happy to disclose this information and others less so. In some cases various private, for-profit government contractors have been taken to court for allegations of abuse and fraud.[93]

Summary

One thing abundantly obvious in U.S. disaster policy and management is the tremendous degree of overlap and interdependence of American governmental jurisdictions. Moreover, U.S. intergovernmental relations are dynamic and ever changing. Sometimes the federal government appears dominant and other times states or localities seem to gain ascendancy. For the United States, homeland security priorities were triggered by acts of terrorism. Counterterrorism efforts demand colossal information collection, processing, and management aimed at preventing or responding to "incidents." These efforts require information sharing, coordination, and considerable centralization of authority. The standardization, security restrictions, and hierarchy of authority needed in homeland security complicates intergovernmental relations, diminishes the role of civilian—and particularly private or voluntary—parties, and subsumes all-hazards emergency management under a new form of American civil defense.[94]

Another obvious but unappreciated aspect of disaster policy is how NGOs, such as VOADs, play a role in the making of disaster policy and in disaster management. These altruistic organizations do much more than "gap fill" the unmet needs of disaster victims. They are part of the essential bulwark of disaster preparedness, response, and recovery. However, these organizations have their own agendas, work together with varying degrees of success, are not necessarily compelled to respond to a disaster, and depend on the donated dollar and on publicity for the good works they do. However, it is people from these organizations that are likely to help you and your family in the middle of the night when your home has been destroyed by a fire. Local firefighters may have rescued you and extinguished the fire. But in the absence of help from family and friends, it will likely be people from a charitable organization that will provide you and your family clothing, temporary shelter, food, and even short-term financial help.

Finally, as national policy for the past fifteen to twenty years, the federal government has engaged either in outright privatization of many functions previously handled by the government or in outsourcing selective functions and activities to private sector firms. State and local governments have also engaged in privatization and outsourcing as well. On top of this, the federal government has retained private for-profit corporations either to manage various short-term projects and tasks or to produce and distribute certain products. Privatization and outsourcing have corresponded with a simultaneous shrink-age of the full-time federal workforce. The world of "government" programs has become a world heavily occupied by for-profit businesses. Many federal emergency management officials dedicate their workdays to managing and overseeing contracts issued to private firms, firms that today implement gigantic swathes of emergency management duties. Heavy disaster management contracting to private firms has reduced federal need for small armies of voluntary, although government paid, temporary disaster workers. Those who seek to understand the intergovernmental relations of disaster management need to understand the world of government contracting.

Key Terms

Chapter 7 Civil-Military Relations and National Security

An Army Chinook Helicopter Crew Drops Sand Bags in a Desperate and Ultimately Futile Effort to Plug a Levee Break on the East Side of the London Avenue Canal September 1, 2005, in the Gentilly Neighborhood of New Orleans, Louisiana. The Military, Most Particularly the U.S. Coast Guard and the National Guard, Engaged in a Massive Response to Hurricane Katrina's Effects in New Orleans and the Gulf Region Damage Zone.

(Source: Photo by Jerry Grayson/Helifilms Australia PTY Ltd/Getty Images.)

THE MILITARY IS A MAJOR PLAYER IN THE NATION'S SYSTEM OF DISASTER RESPONSE; however, military capacities to undertake such work and disputes about the nature and duration of the military role in homeland disasters have been matters of controversy. Nonetheless, emergency management in the United States has been, and continues to be, massively affected by military and national security concerns.

For decades, U.S. civil defense and homeland security policy has been enmeshed in the nation's disaster policy. In the 1950s, civil defense against nuclear attack was the platform upon which modern emergency management evolved. By the mid-1990s, federal policy was to infuse national security matters into the Federal Emergency Management Agency (FEMA) all-hazards approach to emergency management. Today, owing to the 9/11 attacks of 2001, ensuing laws and directives, and the *9/11 Commission Report,* state and municipal governments carry a considerable portfolio of duties related to national security, many since 2003 implemented through U.S.

Department of Homeland Security (DHS) grant programs. Such grant programs come with detailed conditions, requirements, and standards that today compose a sizable share of disaster policy and governmental disaster management.

Disaster management in the United States has almost always been referred to as being "bottom-up"— that is, local emergency management organizations and governments address disasters and emergencies first, seeking help from their state government or from adjacent local governments. Federal government help is perceived as "last resort" assistance, when a state cannot respond to and recover from a disaster or emergency using its own resources. However, since the terrorist attacks on September 11, 2001, political pressures and national fears surrounding the threat of more spectacular and devastating attacks have created a disaster policy that has become very much a "top-down" president-dominated and federal government-dominated system, despite political rhetoric that national emergency management is based on a federal-state-local "partnership." Before the 9/11 attacks, one would have been hard-pressed to identify instances of municipal involvement in national security affairs, but in the months and years following these attacks, many local governments have been expected to shoulder a variety of "homeland" security responsibilities embedded in national security.[1]

This chapter examines military law enforcement issues and the Posse Comitatus Act of 1878, the trend toward securitization[2] and militarization of disaster policy, and the emergence of the DHS. Also discussed is how modern homeland security overlaps domestic emergency and terrorism consequence management at home. The limitations of military response to disaster and the issues of military involvement that have affected disaster policy and politics are included. Finally, this chapter surveys homeland security programs related to national security and how they influence state and local governments and their respective emergency managers.

Presidents, The U.S. Military, And Posse Comitatus

The Posse Comitatus Act of 1878 was passed during Reconstruction following the Civil War in order to prohibit the military from enforcing civilian laws. The law sought to codify the long-standing aversion of Americans to a standing army that could become an instrument of governmental tyranny and control.[3] It established clear boundaries regarding the role the military could play in civil law enforcement. The aim was to ensure that the military would not assume police powers exempted from civilian control.[4]

Under the Posse Comitatus Act, the armed services are generally prohibited from engaging in law enforcement activities inside the United States, such as investigating, arresting, or incarcerating individuals, except as authorized by federal law. The National Guard, however, enjoys a unique legal status. Guard troops are frequently referred to as citizen soldiers, part of the military's substantial Reserve components. Reserve forces were traditionally called to active service only for limited periods, such as for annual training or for short overseas deployments. Since 2003, however, National Guard units of almost every state have been called up for short- or long-term deployments abroad in Iraq, Afghanistan, and elsewhere. When not on active duty, National Guard units remain on call to support the governors of their respective states. If a governor declares martial law in specific areas of his or her state, the National Guard, not the active-duty U.S. military, could assume law enforcement powers and this would not violate Posse Comitatus law. Under U.S. law, Posse Comitatus does not apply to National Guard forces when they are mobilized by governors. Though, when they are called up by the president or the national command authority as "federal" troops, they are not legally allowed to engage in criminal law enforcement.[5] As a result, unless federalized, the National Guard plays the primary role in augmenting state and local law enforcement under state control, whereas the U.S. Department of Defense (DOD) active-duty military plays a supporting role, providing resources and logistical support.[6]

However, the military's role in civil law enforcement has expanded. In the 1980s specific laws were passed to allow the DOD a greater role in drug interdiction and border security. In the 1990s, in response to the Oklahoma City (1995) terrorist bomb attack and to growing fears about global terrorism, the military was given an expanded role in responding to terrorist attacks employing weapons of mass destruction.[7] The 9/11 terrorist attacks gave further impetus to greater military involvement in terrorism prevention and response.

There are an immense number of post-disaster tasks that military units are qualified to undertake. Certain types of military services and equipment may be used to augment the services and equipment made available by civilian governments, the private sector, or nonprofit sector organizations. For example, military units may engage in the following:

- search and rescue
- emergency medical care
- emergency transport of people
- mass feeding
- in-kind distribution of food, clothing, and other necessary commodities
- epidemiological work and disease control
- decontamination (in hazardous materials or radiological circumstances)
- temporary sheltering
- firefighting
- help in restoration of electric power and other utility services
- debris removal to reopen roads
- bridge repair or temporary bridge replacement
- offer of security and property protection aid[8]

Under the homeland security regime established in the years after September 11, 2001, the military has been entrusted with invigorated authority to address vast homeland security concerns in matters of bioterrorism and terrorist use of other weapons of mass destruction. There are a small number of military officials involved in local

disaster-related grant programs (e.g., in chemical weapons disposal transport and routing agreements with local governments, and military base impact programs aiding local governments), but most of these are for highly specific purposes and some are classified.

When is the military called in? State governors may call up their respective state National Guard in disaster or emergency circumstances. Sometimes, governors choose to deploy selected units of the National Guard that have the technical expertise needed to address certain problems that may have overwhelmed or exceeded the capabilities of civilian authorities. The president may ask the defense secretary to deploy the military, and military leaders themselves possess authority to independently respond to disasters. For the president and the military, authority to do this resides in Article IV, section 4, of the U.S. Constitution, the Civil Defense Act of 1950, and the National Emergencies Act of 2002. National emergency authority applies outside of the Stafford Act process of governor-requested presidential declarations of major disaster.[9] However, since the early 1900s, presidents have rarely invoked national emergency authority. Military leaders are even more reluctant to exercise their disaster response authority independently except under the gravest circumstances, as when military people and bases directly experience a disaster. The military, outside the National Guard and other reserve units, ordinarily responds to only presidentially declared major disasters and under conditions set forth in the former National Response Plan (NRP) and since December 2007 the often-revised National Response Framework (NRF).[10]

In 2005 President Bush publicly advocated amending the Posse Comitatus Act to allow the military to become involved immediately and automatically following natural disasters.[11] During his address to the nation on September 15, 2005, following Hurricane Katrina, President Bush stated that he believed the military should play a greater role in future disasters: "It is now clear that a challenge on this scale requires greater federal authority and a broader role for the armed forces—the institution of our government most capable of massive logistical operations on a moment's notice."[12] When the military is deployed to a disaster site, its people and resources sometimes dwarf those of civilian authorities.[13]

Thus, the government response to Hurricane Katrina renewed debate over the efficacy of the Posse Comitatus Act. Several scholars, among them James Jay Carafano, Gregory M. Huckabee, and James F. Miskel, believe that amending the law to grant federal troops greater authority in restoring order in the wake of a domestic emergency is not a good idea and changing Posse Comitatus would be a mistake.[14] One newspaper report disclosed, "Many Pentagon officials have expressed concern about broadening the military's responsibilities to include what would, in effect, be police work, along with its combat role. They argue that it would require very different training, equipment and force levels."[15] An assistant secretary of defense for homeland security said in an interview about the military's response to Hurricane Katrina, "What we ought not do is convert D.O.D. into a department of first responders."[16]

Policymakers may be on firmer political and legal ground, however, if they find ways to use the U.S. military and its resources as supplements to the aid and resources provided by civilian public and private organizations. The military must avoid undercutting local and state emergency response. There are relatively few constraints on the military in playing a supportive role in some disaster circumstances. For example, in major disasters the military has been used to transport victims and medical supplies, provide shelter and mass feeding operations, direct traffic, reopen roads and highways clogged by disaster debris, and engage in emergency repair of infrastructure.

If policymakers granted the DOD active-duty military people law enforcement authority such that all Posse Comitatus Act restrictions were removed, the U.S. military would simultaneously gain and lose. It would gain in the sense that those last vestiges of federal law that inhibit U.S. military law enforcement inside the nation would be removed. The military might be more freely deployed by the president to locations inside the nation when the president determined that the National Guard, along with state and local law enforcement, was incapable of meeting a threat or event of some type. However, the military would lose in the sense that its public image might suffer if its soldiers carried out law enforcement actions improperly and unjustly inside the United States. The military might also suffer if domestic disaster management responsibilities undermined its primary national defense mission.[17]

Owing to past and present massive deployment of military units to Iraq, Afghanistan, and other places outside the United States, there are those who worry that the military is being asked to do too many things as it is. Assigning the active-duty military law enforcement duties inside the United States for anything less than a condition of constitutionally authorized national emergency is arguably unreasonable.[18]

Regardless, the president always has constitutionally protected authority to declare a national emergency, thus freeing the U.S. military to take part in criminal law enforcement or to support domestic operations. For example, federal forces helped to quell riots by miners in Idaho in 1899; protected James Meredith, the University of Mississippi's first black student, in 1961; and assisted in controlling the 1992 Los Angeles riots.[19] During Hurricane Katrina, tens of thousands of active-duty military and National Guard troops streamed into the damage zone, many of them assisting local law enforcement and operating under state law.[20] In fact, federal forces have been used to enforce laws over 175 times in the past 200 years under the authority of the U.S. Constitution and various enabling laws. In short, the federal troops can be there when they are needed.[21] The deployment of active-duty military people to domestic zones of disaster is not unusual, however, as yet most presidents have been both reluctant and careful not to invest those forces with police powers, though there have been exceptions.

Militarization of Disaster Policy

Modern homeland security highlights the overlap of domestic emergency management and terrorism consequence management at home. Owing to the range of weapons and instruments potentially available to modern terrorists and the damage these might cause, antiterror emergency management and conventional disaster management may actually complement each other better today than civil defense and conventional disaster management did during the Cold War of 1946–1990.

Many conventional disaster management duties and homeland security obligations are interwoven. Homeland security obligations have contributed to the militarization of more realms of disaster management. Preparation for hazardous materials incidents overlaps much of that for bioterrorism events. Preparedness and response planning for a major urban earthquake parallels some elements of preparedness and response planning in the event of the detonation of a low-yield nuclear weapon in a large metropolitan area. In some ways, hurricane civil evacuation planning dovetails with civil evacuation planning for dirty bomb incidents.

Under current arrangements, the military provides key support and partners with civilian emergency responders, but the overall tasks of assessing needs, interagency coordination, deployment of urban search and rescue teams, and overall management of federal disaster response have been entrusted to DHS and its FEMA. Most of the functions, tasks, and skills that are essential in all phases of emergency management fall outside the scope and mission of the military, whose primary functions are to deter war and provide security for the nation. In the United States most emergency management responsibilities continue to be entrusted to civilian, not military, organizations and institutions.[22]

However, some state governments require that their respective state emergency management agency report daily to the state adjutant general, a military official, under a military-dominated model of state emergency management. In non-disaster circumstances, two additional states have their respective civilian emergency management organizations report to the state adjutant general.[23] States with emergency management organized on a military-dominant model usually assign emergency management work to a state military department or division and employ both military and civilian workers, who work closely with military supervisors. Regardless of whether states organize their emergency management under the state adjutant general military model or not, each state's emergency management is influenced by the military, owing to the prominent place the National Guard holds in disaster response in all states (see the "How Things Work" box).

Sometimes in the wake of catastrophic disasters, lawmakers propose that the military become more intimately involved in disaster response. Proponents for more military involvement point out that the military's command and control structure, plus its logistical systems, would provide the kind of framework and efficiency that was missing in civilian agency responses to Hurricanes Katrina (2005) and Andrew (1992), for example. Others underscore the usefulness of military resources such as helicopters and watercraft for rescue, as well as tents and portable facilities to provide for human shelter. Just as the U.S. military responds to disasters abroad, it is able to do likewise at home. Still others argue that the military's most important role could be in providing security following the most catastrophic and destabilizing events. The most extreme arguments advocate transferring the responsibility for emergency response from civilian agencies like FEMA to the DOD.[24]

The Military's Role in Disaster Response and Recovery Efforts

The military is often a magnificent asset in humanitarian disaster response. National Guard and active-duty military people are trained to follow orders, trained to operate in the field, prepared to move into hazard zones with enough equipment to sustain themselves independently for considerable periods, and willing to put themselves in harm's way.

Military people and emergency responders are expected to take these risks if they are so ordered. Certainly, civilian firefighters, police officers, and emergency medical people are willing to take similar risks and often do. Still, civil servants, often dedicated to their work in valiant ways, are not expected to enter danger zones that pose a significant risk to their health and welfare.[25] These civilian officials, including FEMA workers, are in fact prohibited by federal law from taking dangerous personal risks in disaster response.

How Things Work: State Emergency Management and State Militaries

In some states, the overlap between emergency management and homeland security functions is evident in the allocation of responsibilities to the directors, or the chain of command, rather than in the bureaucratic structure of the departments. States that fit this category are as follows:

Alabama—Emergency management and homeland security are separate departments, but the director of emergency management is also the assistant director of Homeland Security for Emergency Preparedness and Response. The director is required by statute to "maintain liaison with and cooperate with major commanders of the armed forces within the state, and the State Military Department."

Arizona—The director of emergency management is appointed by the adjutant general, and his or her responsibilities, as defined by statute, are subject to the approval of the adjutant general.

Idaho—The Bureau of Homeland Security and Disaster Emergencies is headed by a chief appointed by the adjutant general with the concurrence of the governor; the governor can also opt to appoint the adjutant general as chief of the bureau. The adjutant general serves as the governor's authorized representative for emergency planning, preparedness, response, and recovery from all hazards.

Kentucky and Maryland—The positions of adjutant general and director of emergency management are held by two different persons, and their respective departments are separate; however, the emergency management director is accountable to the adjutant general.

Maine—The adjutant general is the commissioner of the Defense, Veterans, and Emergency Management Department. He also serves as the governor's official homeland security adviser.

Minnesota—The director of the Division of Homeland Security and Emergency Management is within the state's Department of Public Safety. Under statute, only the functions and responsibilities of the State's Division of Emergency Management are enumerated.

Missouri—The Missouri State Emergency Management Agency was created under statute "within the military division of the executive department, office of the adjutant general;" the adjutant general is the executive head of the agency. Currently, a civilian is director of the agency.

Montana—The Division of Emergency Services (DES), which also calls itself the Department of Disaster and Emergency Services, is within the state's Department of Military Affairs. DES serves as the lead agency for the state's Homeland Security Task Force.[26]

The Pentagon responded to the Hurricane Katrina catastrophe. By August 31, two days after the hurricane struck Louisiana, the Defense Department had started medical airlifts, and the USS *Bataan,* a multipurpose amphibious assault ship equipped with two search and rescue helicopters, dispatched to provide humanitarian assistance, had arrived off New Orleans. A second amphibious assault ship and an aircraft carrier arrived on September 6, 2005, near the Gulf Coast damage zone. Twenty ships, 360 helicopters, and 93 fixed-wing aircraft were in the affected area by September 7. It was allegedly the largest and fastest deployment of U.S. military forces in support of a natural disaster in the nation's history.[27] Almost 50,000 National Guard[28] people were deployed to support hurricane relief, and more than 17,000 active-duty troops from the 82nd Airborne and First Cavalry pitched in as well.[29]

The nation's experience with Hurricane Katrina highlighted the importance of the military in disasters. When local and state assets are overwhelmed during a disaster, it is appropriate for military people and assets to be brought in to bridge the gap until civilian responders can handle the situation. And that did happen in the response to Hurricane Katrina.[30] However, military organizations are often ill-equipped to handle many short- and long-term disaster recovery needs: rebuilding homes, managing shelters, feeding the displaced, resettling people, helping businesses resume operation, providing disaster unemployment aid, servicing the long-term medical needs of disaster victims, replacing major public infrastructure, and bringing back public utilities, to name a few.

Owing to changes made after the 9/11 terrorist disaster, the active military now has a greater presence in

addressing domestic disaster, but the military is chiefly poised and prepared for various forms of terrorist-caused disasters.

The U.S. Army Corps of Engineers

Military involvement in emergency management work has long been part of U.S. Army Corps of Engineers' (USACE) work inside the nation. Since it was formed in 1802, the USACE has built, owned, maintained, and managed an enormous amount and variety of public infrastructure inside the United States. The corps' role in responding to natural disasters emerged in matters of flood control after the Civil War. Floods on large rivers such as the Mississippi impaired commerce, destroyed property, and cost lives. Over the years the corps was asked by the federal government to contribute to both military construction and works "of a civil nature," many of these related to water resources, maintenance of navigable waterways, and flood control. Throughout the nineteenth century, the corps supervised the construction of coastal fortifications, lighthouses, jetties, and piers for harbors. It also mapped navigational channels and much of the American West as well. In the twentieth century, the corps became the lead federal flood control agency and significantly expanded its civil works activities, becoming a major provider of hydroelectric energy and water impoundment recreation areas.

The corps' first formal disaster relief mission was during the Mississippi Flood of 1882, when it supported efforts to rescue people and property. Army engineers also played a critical role in responding to the Johnstown, Pennsylvania, flood of 1889 and the San Francisco earthquake of 1906. Under the Disaster Relief Act of 1950 the corps continued to be the lead federal agency during flood disasters.[31] Under the NRF, the corps is the lead agency for one of the working groups of Emergency Support Function 3: Public Works and Engineering. After Hurricane Katrina, the corps "led the effort to repair the levees that flooded New Orleans and its environs."[32] The corps has also played a role in response and recovery from Superstorm Sandy, which struck coastal areas of New York and New Jersey in late 2012.

However, one critic of the corps alleged that "Shoddy Army Corps engineering crippled the Greater New Orleans flood-control system," thus contributing to the hurricane vulnerability of the levees in and around New Orleans.[33] The corps has also been criticized for overreliance on engineered structures to mitigate flood threat. Sometimes these structures provide a false sense of security to people in communities threatened by flood. Yet, to be fair, in the 1990s and beyond, the USACE has made significant commitments to nonstructural flood mitigation and environmental protection.

The U.S. Coast Guard

Given the 9/11 terrorist attacks and Hurricane Katrina, the militarization of disaster management has advanced in some interesting ways. For example, the U.S. Coast Guard, a part of the DHS since 2003, has a much higher profile in disaster management today than in the past.[34]

The U.S. Coast Guard is a military organization highly praised for its Hurricane Katrina disaster response, in which its people carried out a great many rescues. The U.S. Coast Guard rescued more than 33,000 people during and after the storm, often under harrowing conditions.

President George W. Bush responded to dissatisfaction with civilian agency response to the needs of people in New Orleans and surrounding areas by assigning a Coast Guard admiral, Thad Allen, the lead DHS role in managing disaster response operations in and around New Orleans.[35] Admiral Allen resigned from this post once he judged that his Katrina disaster response work was largely complete.

The National Guard and State-Level Disaster Management

The National Guard is made up of the Army National Guard, the Air National Guard, and reservists called up to serve. National Guard personnel are commanded in each state by the state's governor unless the guard is mobilized for federal duty by the president. There are stages of involvement in the National Guard that include voluntary activation, involuntary activation, and deactivation. At any point in time, the National Guard may have more than 100,000 soldiers, air men and reservists activated, though it may in times of great emergency call up as many as 600,000+ as it did in the period immediately after the 9/11 attacks.[36] The Army and Air National Guard forces are hybrid state-federal militias whose roots reach back before the Revolution. Normally under the control of state governors, the Guard is almost entirely funded and equipped by the federal government, and the troops are trained to the same standard as active-duty personnel. With the governors' permission, National Guard troops can be federalized and sent on national missions under the control of the Defense Department.[37]

The troops can perform law enforcement functions under a state's laws but, as explained earlier, cannot enforce criminal law when they are federalized—when they are under the direct control of the president. The National Guard is a principal and major resource for governors who must respond to a disaster event. The National Guard provides well-trained people, "communications systems and equipment, air and road support, heavy construction and earth-moving equipment, and emergency supplies such as beds, blankets, and medical supplies."[38]

In 1992 the Florida National Guard was fully available in the aftermath of Hurricane Andrew. By contrast, in 2005 only about 60 percent of the Mississippi National Guard and 65 percent of the Louisiana National Guard were available to deploy to Hurricane Katrina's (much bigger) zone of devastation because so many were on overseas missions.[39] The issue here is whether or not civilian authorities need to reconsider their disaster management dependence on the National Guard given the guard's heavy obligations abroad and given concerns about its ability to recruit sufficient numbers of soldiers.

Relatedly, there are disputes over whether National Guard forces should be federalized by the president when the president judges that circumstances warrant doing so. When a president determines that it is necessary to federalize National Guard units, this often signifies that a breakdown in president-governor relations has occurred. However, what matters most is the proper use of the military, including the National Guard, in disasters and the realization that military help is highly temporary. The deployment of the National Guard and active-duty military to a zone of disaster connotes failure of civilian government in that zone. The military would be expected to engage in search and rescue, protect property and life, and maintain civil order. However, martial law is a last resort act of desperation in the United States.

After Hurricane Katrina, a reporter quoted a National Guard official as saying that the guard can handle both international and domestic jobs. "I think the response of the military was more than sufficient, effective and timely for Katrina," and more effective than the response of any other part of the federal government.[40] After Hurricane Andrew (1992), in the final months of the George H. W. Bush administration, proposals were made in Congress that would have broadened the military's role in responding to domestic disasters. They included rolling FEMA into the Defense Department; placing a key portion of FEMA, such as its communications apparatus, in the Defense Department; and increasing the role of the National Guard in emergency response.[41] Few of these proposals won approval, largely because senior military officials told lawmakers that the Pentagon did not want to absorb FEMA and its domestic emergency management responsibilities.

Some counter that local officials, from small-town sheriffs to big-state governors, say Louisiana's problems during Katrina were the exception, not the rule. They say the DHS and the Pentagon overreached in their move to dominate disaster management and that a federal takeover of relief work in the future would make matters worse. Assigning the active-duty military a lead role in domestic disaster response raises a host of difficult questions, including whether the active-duty military should have deadly force authority to keep order in a homeland disaster, whether the National Guard or the active-duty military is in charge if both are responding, and what authority governors retain in such situations.[42]

The Rise of the North American Command

The 9/11 terrorist attacks dramatically opened the door to heavier military involvement in disaster policy. One domain of this advance has been air defense. As the *9/11 Commission Report* vividly recounts, civilian and military air controllers and authorities encountered a series of major problems in their efforts to cope with hijacked commercial airliners being used as weapons of terror.

Authorized by President George W. Bush on April 17, 2002, the DOD established the U.S. Northern Command (USNORTHCOM) to consolidate under a single unified command existing homeland defense and civil support missions that were previously handled by other military organizations. The purpose of the USNORTHCOM is to provide command and control of DOD homeland defense efforts and to coordinate the defense support the military provides to civil authorities. USNORTHCOM considers its primary role as that of defending America's homeland. USNORTHCOM has a civil support mission that includes domestic disaster relief operations needed to address fires, hurricanes, floods, and earthquakes. Civil support also includes counter-drug operations and managing the consequences of a terrorist event involving a weapon of mass destruction. When asked by the DOD, USNORTHCOM provides assistance to each civilian led agency in cases of natural or human-caused disaster or catastrophe and for national special security events. In compliance with the Posse Comitatus Act, USNORTHCOM military forces may provide civil support but cannot become directly involved in law enforcement.

The U.S. military has engaged in massive studies and preparations gearing up for homeland deployments in catastrophic disasters, most of those envisioned as the result of terrorism. Since 2002 USNORTHCOM has fulfilled many duties under the NRP (through 2007) and under the NRF (2008–). USNORTHCOM has the job of "orchestrating the operational aspects of defense support to civil authorities in all of its forms…."[43]

The Pentagon's presence in federal emergency responses plans was nothing new; however, USNORTHCOM itself was a newly created entity in 2002. NRF was issued in final form in January 2008.[44] The NRF superseded the NRP issued officially in April 2005 about four months before Hurricane Katrina. The NRP itself was mandated by the Homeland Security Strategy of 2002, the Homeland Security Act of 2002, the November 2002 Reorganization Plan to create the DHS, and in conformity with Homeland Security Presidential Directives 5 and 8 (HSPD-5 and HSPD-8) issued by President George W. Bush. The NRP replaced the Federal Response Plan (FRP) issued initially in May 1992 and revised and reissued in 1999.[45] There is a significant military thread in each of these plans owing to protocols and agreements regarding military support to civil authorities in times of disaster as well as longstanding roles for the military in various emergency support functions (ESFs) under federal plans dating back at least as far as 1992.

USNORTHCOM was established to better protect the homeland from attack. USNORTHCOM people have worked to find their place in national disaster management. However, military culture is rarely compatible with the culture of civilian emergency management.[46] The USNORTHCOM mission is to help prevent another terrorist attack on the homeland by militarily defeating attacks by foreigners, if possible, by protecting U.S. borders or airspace from encroachment or penetration by attackers, or by aiding in the response to an incident involving a weapon of mass destruction inside the United States.

History's Lessons: Rise of the Security Military-Industrial Complex

The USA PATRIOT Act (Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism) hurriedly enacted into law after the 9/11 attacks significantly changed public policy and expanded collaboration between the federal, state, and local governments and the U.S. military. Article 2 of the Patriot Act states that information sharing could take place among government agencies (to enhance investigative efforts). This removed a long-established barrier that prevented law enforcement, intelligence, and defense agencies from exchanging information and cooperating in investigations.

In addition, the article established new rules of collaboration between police and military that permitted the exchange of military tactics, organization, and hardware to support state and local law enforcement investigations and operations. Article 3 of the Patriot Act provides for the rapid updating of cybertechnology countermeasures in order to fight a more advance digital–age battle with terrorists.

Outside of domestic intelligence gathering, militarization is being carried out through the purchase of, or transfer of, inordinate amounts of surplus military equipment to state and local law enforcement agencies. The Patriot Act provided the legal parameters for the transfer of surplus military equipment while the Homeland Security Grant Program (HSGP) provided the financial resources.

The Center for Investigative Reporting revealed that since 9/11, state and local law enforcement agencies have used in excess of $34 billion in federal grants to acquire military equipment. According to some, the United States evolved into a security military-industrial complex that comprises federal, state, and local legislators; commercial contractors; and military procurement officials.

Since 9/11 and the subsequent enactment of the Patriot Act, the erosion of personal privacy in the name of national security has been unrelenting. On September 6, 2006, the American Civil Liberties Union (ACLU) listed its top ten government abuses of power since 9/11. The list includes warrantless wiretapping; torture, kidnapping, and detention; surveillance of society; Patriot Act abuse; government secrets; Real ID Act; no fly and selective lists; political spying; abuse of the material witness statute; and attacks on academic freedom. In 2011, the ACLU claimed the following:

> The so-called war on terror has seriously compromised the First, Fourth, Fifth and Sixth Amendment rights of citizens and non-citizens alike. From the USA PATRIOT Act's overbroad definition of domestic terrorism, to the FBI's new powers of search and surveillance, to the indefinite detention of both citizens and non-citizens without formal charges, the principles of free speech, due process, and equal protection under the law have been seriously undermined.[49]

By June 2013, revelations of global and comprehensive telecommunications and Internet spying by the National Security Agency divulged by disgruntled computer analyst Edward Snowden, a federal contractor employee, who sought and secured temporary asylum in Russia, underscored the end of telephonic and Internet communication privacy for Americans and most of the rest of the world.[50]

The ACLU maintains that the greatest threat to our civil rights is posed by the militarization of law.[51] The excessive militarization of law enforcement operations runs counter to the Fourteenth Amendment wherein it asserts the guaranteed privileges and immunities of citizenship, due process, and equal protection. Militarization challenges section 1 of the Fourteenth Amendment due process clause:

All persons born or naturalized in the United States and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

USNORTHCOM has occasionally been a target of criticism. Critics of USNORTHCOM acknowledge the need to protect America from terrorist attack, but they also "argue that the delicate task of domestic intelligence gathering should be left to law enforcement."[47]

Owing to the national security features of homeland security evident in USNORTHCOM operations and the inclusive requirements of the NRF and the National Incident Management System (NIMS), disaster policy today is infused with "national securitization" issues. Much of what USNORTHCOM does is conducted under rules of state secrecy. Security classification now shrouds from public view a variety of emergency response plans, including those in place for facilities whose operation may pose a danger to surrounding communities. Homeland security law and policy have infused disaster management with major sums of money, but they have also made disaster policy implementation more closed, more secretive, and more dominated by the military and law enforcement. These are problems likely to become flash points of controversy in future disaster circumstances.

Homeland Security Terrorism Programs

State and local governments have been in the business of managing and budgeting for disasters and emergencies for a great many years, certainly well before federal disaster relief programs were set forth. Virtually every local government municipal charter obligates the jurisdiction to provide for public safety, which encompasses local emergency management and today homeland security. Owing to homeland security obligations and expanded emergency management duties, state and local governments are now important and active coparticipants in the NRF and NIMS.[48] Let's consider several homeland security programs that have penetrated the world of state and local government since 9/11 (see the "History's Lessons" box).

The Homeland Security Advisory System

On March 12, 2002, DHS launched the highly problematic Homeland Security Advisory System (HSAS). It was a threat-based, color-coded system used to inform the American public and its safety officials about the status of terrorist threat to the nation or to parts of the nation. Government authorities and the public could thereby exercise heightened vigilance that might thwart a terrorist attack, or, should an attack of some sort be imminent, they could take appropriate protective measures.

However, raising or lowering the threat condition to a different color level produced problems. The system was poorly conceived in that it could not simultaneously be a national alert system and an indicator of daily, weekly, or monthly national threat condition status. Many Americans were disturbed, annoyed, and confused by what DHS was doing with the system. HSAS rankled many state and local officials as well, among them law enforcement and emergency management people.

At first, HSAS repeatedly raised and lowered the threat status between elevated (yellow) and high (orange). After two years of the system's operation, DHS reduced its pattern of rapid fluctuation, owing to public opposition and new DHS standards governing the system's use.[52] Nevertheless, few homeland security activities have drawn as much public and political ire and criticism as has the color-coded, threat level system. State and local officials complained of unreimbursed police and fire overtime costs attributable to high-alert levels. Others complained that the color coding was not specific as to the actual threat Americans need to prepare for. State and local criticism of, and resistance to, the threat-based, color-coded HSAS contributed to its elimination. The HSAS was replaced by the National Terrorism Advisory System (NTAS) in April 2011. Color coding was eliminated, and only two levels of alert were employed. See the "How Things Work" box.

In the aftermath of the 9/11 attacks, the 9/11 Commission and a great many policymakers, including President George W. Bush and Vice President Dick Cheney, labored to better integrate terrorism-related federal grants and programs. John Fass Morton said the following:

How Things Work: The National Terrorism Advisory System

The NTAS was launched to replace the highly controversial and unpopular HSAS. The HSAS color-ramped alert schema was poorly conceived and operated by DHS and, worse still, it alienated a great many state and local public officials, including emergency managers. The NTAS offered simplification; somewhat greater specificity about threat posed, possible target(s), and recommended response actions; time limits on how long advisories stand; and a two-tiered audience notification method.

NTAS alerts come through two categories:

Imminent Threat Alert: Warns of a credible, specific, and impending terrorist threat against the United States.

Elevated Threat Alert: Warns of a credible terrorist threat against the United States.

After reviewing the available information, the secretary of DHS will decide, in coordination with other federal entities, whether an NTAS alert should be issued.

NTAS alerts will only be issued when credible information is available.

These alerts will include a clear statement that there is an imminent threat or elevated threat. The alerts will provide a concise summary of the potential threat; information about actions being taken to ensure public safety; and recommended steps that individuals, communities, businesses and governments can take to help prevent, mitigate, or respond to the threat.

The NTAS alerts will be based on the nature of the threat: in some cases, alerts will be sent directly to law enforcement or affected areas of the private sector, while in others, alerts will be issued more broadly to the American people through both official and media channels.

Sunset Provision

An individual threat alert is issued for a specific time period and then automatically expires. It may be extended if new information becomes available or the threat evolves. Thus, NTAS alerts contain a sunset provision indicating a specific date when the alert expires; there will not be a constant NTAS alert or blanket warning that there is an overarching threat. If threat information changes for an alert, the secretary of DHS may announce an updated NTAS alert. All changes, including the announcement that cancels an NTAS alert, will be distributed the same way as the original alert.[53]

History's Lessons: Homeland Security Grant Programs

FEMA oversees a handful of grant programs that pay for the prevention of and response to terrorist attacks in states and cities. Chief among them is the Urban Area Security Initiative (UASI), which distributed about $832 million in grants to metropolitan regions in 2010. By 2012, the amount had dropped to $490 million. The State Homeland Security Program (SHSP), which sets aside 80 percent for local governments, experienced an even bigger decline in funding, from $842 million in 2010 to $294 million in 2012. Both programs began after the 9/11 attacks, along with smaller grant programs for public transit systems and ports. The grants help city police departments cope with a new reality that goes beyond traditional crime fighting.[56]

After 9/11, police needed new expertise and equipment for terrorist attacks. Now more than a decade after the horrific attacks, police are in a much better position today in terms of intelligence, police sharing and analysis thanks to the funding provided by UASI and SHSP. The question is whether local law enforcement can pre-serve those gains without sustained financial support from the federal government. For instance, how will new officers be trained? What happens when biohazard suits need to be replaced?[57]

The president's fiscal year 2014 budget calls for consolidating the various HSGPs to eliminate redundancies and to direct increasingly scarce grant dollars where they would have the greatest impact. A similar proposal last year met with much resistance in Congress. However, demands to cut federal spending may compel Congress to consolidate the programs to achieve economies. Last December, Oklahoma senator Tom Coburn questioned the value of the UASI grants in an oversight report. He complained UASI was supposed to function as a start-up investment, not ongoing support, and many of the cities whose officials are most vocal about losing UASI grant funding "aren't traditionally considered the targets of terrorists," such as Toledo, Ohio, and Riverside, California. Over time, UASI has become "an entitlement program for states, rather than a program that protects our cities from terrorists," Coburn asserted.[58]

In a section of the report titled "The Politics of Risk," Senator Coburn described how state and local government groups pressured DHS to expand the program and change its risk analysis. In 2011 a California public safety official admitted to intentionally- inflating risk scores to receive more money. In the context of that kind of lobbying, the report cited efforts by the Massachusetts congressional delegation to win grants for the Boston metropolitan region, which ranked tenth among urban grant recipients last year. Most of the report's criticism, however, focuses on smaller urban areas such as Thousand Oaks, California.[59]

Not only have the U.S. Conference of Mayors and National League of Cities opposed cuts to UASI and related homeland security programs but they are against President Obama's consolidation proposal. City leaders say they want to preserve UASI as a stand-alone program because it works well and already targets the highest risk areas. Of the thirty-one cities to receive funding in 2012, ten of them received 86 percent of the money, including New York City, Washington, D.C., and Boston.[60]

Between 2010 and 2012, Boston relied on five federal grant programs to support local homeland security training, planning, and equipment procurement. In 2010 those programs provided the city with $19 million, but by 2012 Boston received slightly less than $9 million, with all but $50,000 coming from UASI, according to a tally by the state's Office of Safety and Security.[61]

In the past ten years, the federal government has given state and local governments more than $35 billion for planning, response, and recovery efforts related to natural disasters, terrorist attacks, and other events. As a result, there are now seventy-eight information hubs—officially called fusion centers—that allow federal, state and local public safety agencies to collaborate effectively in situations similar to the Boston Marathon bombing. The money covers a range of uses, including training exercises for mass shootings and the replacement of first-responder radios. But as Coburn's report points out, some of the projects that received funding have a less clear-cut role in combatting terrorism.[62]

No longer eligible for UASI grants are Tucson, Arizona; Sacramento, California; Jacksonville, Florida; Honolulu, Hawaii; Milwaukee, Wisconsin; and Oklahoma City, Oklahoma among others. "We don't know what we're going to do [without funding]," Milwaukee fire chief Mark Rohlfing said. Milwaukee used the funds to help pay for its Emergency Management and Homeland Security office, staffed by a director, two police officers, and a fire department battalion chief. "It's been a great help to prepare our city and the southeast area of our state," he said.[63]

The 9/11 attacks provided greater urgency for the consolidation of grant policy and grant management into one federal office. Cheney and FEMA Director [Joseph] Allbaugh had an idea to transfer Justice's Office of Domestic Preparedness (ODP) with its Nunn-Lugar-Domenici grants to FEMA's newly established Office of Domestic Preparedness. The 9/11 and anthrax attacks focused attention on all of the new intergovernmental resourcing of the federal government's domestic preparedness support to the states.[54]

Morton chronicles the disputes over 2002 and 2003 among very senior DHS officials, including DHS secretary Thomas Ridge and FEMA head Michael Brown (Allbaugh's successor), concluding that the Office of Domestic

Preparedness went to the secretarial level of DHS, not to FEMA.[55] Ironically, much of the squabbling was between the law enforcement community and the emergency management community. The very brief overview of FEMA homeland security–related grant programs in the "History's Lessons" box explains how terrorism-related national security and defense concerns came to permeate both emergency management and the nation's overall disaster policy. Federal funds, rather than direct federal regulation, was a major inducement for America's state, cities, and counties. Since no one knew for sure where terrorists might strike next, officials of nearly every state and local jurisdiction came to see that they had a vested interest in jumping on the lavish federally funded homeland security bandwagon.

Table 7-1 Urban Area Security Initiative Federal Funding in Fiscal Year 2012

Here is a list of cities and their respective UASI funding in federal fiscal year 2012:	
New York City Area	$151,579,096
Los Angeles/Long Beach Area	$61,029,547
National Capital Region (DC)	$51,839,027
Chicago Area	$47,703,062
Bay Area (California)	$26,423,268
Houston Area	$23,936,523
Jersey City/Newark Area	$21,663,035
Dallas/Fort Worth/Arlington Area	$14,292,691
Philadelphia Area	$14,268,859
Boston Area	$10,861,397
San Diego Area	$9,156,712
Miami/Fort Lauderdale Area	$5,401,304
Atlanta Area	$5,283,893
Detroit Area	$5,232,574
Anaheim/Santa Ana Area	$4,455,106
Seattle Area	$4,365,457
Baltimore Area	$4,116,111
Phoenix Area	$4,018,455
Twin Cities Area	$3,270,673
St. Louis Area	$2,908,188
Tampa Area	$2,595,211
Denver Area	$2,527,525
Portland Area	$2,157,259
Las Vegas Area	$1,826,923
Riverside Area	$1,521,937
Charlotte Area	$1,494,751
Orlando Area	$1,447,416
Indianapolis Area	$1,250,000
New Orleans Area	$1,250,000
Kansas City Area	$1,250,000
San Antonio Area	$1,250,000[65]

Source: U.S. Department of Homeland Security, "FY 2012 Homeland Security Grant Program (HSGP)," www.fema.gov/media-library-

data/20130726-1840-25045-5504/fy_2012_hsgp_program_fact_sheet_062612_clean_1.pdf.

The Urban Area Security Initiative

The Urban Area Security Initiative (UASI) is a major DHS program, and it involves emergency management. The program is highly complex and a challenge to administer on the federal, state, and, especially, local levels. UASI encapsulates many of the counterterrorism duties and problems that have been imposed on local law enforcement and local emergency management. The aim of UASI, authorized by federal law in 2005, is to facilitate rapid response in the nation's fifty largest cities (now down to thirty-one largest cities, see Table 7-1) to attacks from weapons of mass destruction. The urban areas that were selected have high international profiles and large populations.[64] UASI addresses planning, operations, equipment acquisition, training, and exercise needs. The program provides financial assistance to these areas based on a risk-and-needs approach. The amount given to each city is determined by a formula that combines current threat estimates, critical assets within the urban area, and population density. There is no state or local matching fund requirement for this program.

Early in the life of the program DHS officials informed states of their cities' eligibility for the program. The state government must obligate at least 80 percent of all federal funding provided through the program to the designated urban area within sixty days after receipt of funds. The UASI program was part of the consolidated HSGP and operates on biennial (two-year) cycles, which means UASI recipients do not need to reapply in order to receive second-year funding. UASI-authorized annual funding levels for fiscal years 2005, 2006, and 2007, respectively, were $854 million, $734 million, and $817 million.

Central to the UASI mission is helping state and local governments build and maintain the capability to prevent, protect against, respond to, and recover from threats or acts of terrorism. The range of expected terrorism (whether state-sponsored or nonstate-actor-initiated) threats includes an array of attack weapons commonly referred to as chemical, biological, radiological, or nuclear (CBRN). The radiological includes dirty bombs, and the nuclear involves atomic weapons.

In the aftermath of Hurricane Katrina in 2005, however, policymakers called for a change in UASI national planning priorities. They required that the program also address issues such as pandemic influenza and catastrophic disaster (as might be caused by a major hurricane or earthquake). Administrators of UASI were asked to accommodate catastrophic events like Hurricane Katrina, something most local emergency managers were happy to see. In effect, post-Katrina changes in the program reintroduced "dual-use" requirements of the type common in the Cold War civil defense era. UASI grants could fund nonterror disaster management but only on condition that these activities "also" enhanced the jurisdiction's ability to address terrorism: "dual use."

Although the program dispensed the grants by formula, eligible governments had to apply for UASI funds and win DHS approval. Funds provided were to address the unique needs of large urban municipal government areas and mass transit authority special district governments. As mentioned previously, UASI funds could be used for equipment, training, exercises, and planning but could neither be used to hire new employees nor subsidize salaries of current workers. This program limitation produced considerable managerial and political controversy. Some state and local officials objected to the limited sets of purposes UASI funds could be used to address. The program was heavily biased toward the purchase of DHS-approved equipment. This may appear to be a minor problem, but because almost all of the DHS-approved equipment was geared for counterterrorism purposes and because UASI money came almost exclusively for the purchase of equipment (not for salaries to pay personnel), distortions resulted at the local level.

In some cases, state and local governments were accused of using UASI funds to purchase lavish, unnecessary, and exotic counterterrorism equipment. News investigations of such activity triggered claims of wasteful spending and pork barreling.[66] The counterargument might be that local officials, fearing that seemingly one-time federal UASI or other homeland security grant funds would be lost or would go to other jurisdictions and appreciating that they are rarely the beneficiaries of federal largess, may have felt justified in purchasing vehicles and equipment that were excessive or of questionable necessity. Where that equipment had dual-use application that worked to the benefit of local emergency management, such equipment acquisitions might have been judged acceptable by both the

public and journalist investigators.

Regardless, the federal UASI money came with prodigious paperwork demands. Applicant governments had to demonstrate that they had prepared an Urban Area Homeland Security Strategy and that their state government had in place a state program and Capability Enhancement Plan. Even then, applicant governments had to document that their request for UASI funding was consistent with the goals, objectives, and priorities of the national Urban Area Homeland Security Strategy and in conformity with UASI policies and conditions. Applicant local governments also had to prove that their Urban Area Homeland Security Strategy was consistent with their respective state's Homeland Security Plan. The state government itself was expected to have in place a program and Capability Enhancement Plan, under requirements of the DHS SHSP.

In fiscal year 2006, DHS identified thirty-five areas eligible to apply for and receive UASI funding. These thirty-five areas encompassed ninety-five cities, and each area had a population that exceeded 100,000. Of late, UASI has sought to build greater regional capabilities across selected geographic areas.

All eligible applicants must submit an "investment justification." This identifies needs and outlines the intended security enhancement plan to be addressed with the funding. That plan is expected to meet the target capabilities outlined in the National Preparedness Goal, itself a product of HSPD-8, issued in December 2005. Target capability is homeland security jargon that refers to the ability of a government jurisdiction to prevent, or respond to, a range of different types of terrorist attacks. The purpose of the National Preparedness Goal is as follows:

> Establish policies to strengthen the preparedness of the United States to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies by requiring a national domestic all-hazards preparedness goal, establishing mechanisms for improved delivery of Federal preparedness assistance to State and local governments, and outlining actions to strengthen preparedness capabilities of Federal, State, and local entities.[67]

Investment justifications are reviewed, scored, and prioritized (by DHS officials) along with risk factors to determine which investments should be funded to best address need and minimize risk.

UASI is only one of several HSGPs directed to state and local government. Unfortunately, each of these programs is rife with federal "boilerplate" language that for many state and local officials (as well as professors, students, and others) makes them unclear and arbitrary. The complexity of these programs opens the door to considerable misunderstanding. UASI demands that local recipients of government grants collect a massive amount of information and use it to engage in elaborate planning work. More than this, the plans are tested against envisioned scenarios, most of them anticipating some type of terror attack with some type of terror weapon. The burden of UASI paperwork reportage and UASI prohibitions against using federal funds to hire staff in some respects represents a partially unfunded mandate imposed by the federal government on state and local governments.

The Law Enforcement Terrorism Prevention Program

The Law Enforcement Terrorism Prevention Program (LETPP) supports law enforcement communities in their efforts to detect, deter, disrupt, and prevent acts of terrorism. Categories of aid include the following:

- information sharing to preempt terrorist attacks
- target hardening to reduce vulnerability of selected high-value targets
- recognition and mapping of potential or developing threats
- interoperable communications
- interdiction of terrorists before they can execute a threat or intervention activities that prevent terrorists from executing a threat[68]

As in other homeland security program grants, federal funding is disbursed first to the state government. Local law enforcement agencies are then advised to work with and seek LETPP funding from the state's lead law enforcement agency.[69]

The LETPP encourages its participating organizations to collaborate with private security organizations, government agencies outside law enforcement, and with the private sector in general. The LETPP has no matching grant provisions.[70] Why mention the LETPP in a study of disaster management? The LETPP pulls local law enforcement into the counterterrorism business. The program's use of so-called fusion centers provides a nexus of local, state, and federal terrorism-focused law enforcement; and local emergency managers are part of this nexus.

The Emergency Management Performance Grant Program

Emergency Management Performance Grants (EMPGs) are allocated to states, which use the money to bolster their intrastate emergency management programs and capabilities. EMPG funds are to "support comprehensive emergency management at the state and local levels and to encourage the improvement of mitigation, preparedness, response, and recovery capabilities for all-hazards."[71] DHS-FEMA wants states to use EMPG money to foster partnerships of government, business, volunteer, and community organizations. DHS-FEMA also suggests that the funds be used to pay for joint operations, mutual aid, local and regional support, and state-to-state cooperation. For many years, EMPGs were based on dual-use Cold War funding for local emergency preparedness programs that had evolved from civil defense against nuclear attack.[72]

States are free to decide on their own how much EMPG money they will pass on to their local jurisdictions.[73] EMPGs are designed to help state and local emergency managers develop, maintain, and improve their emergency management capabilities, providing assistance in emergency planning, training, exercising, and interdisciplinary coordination. Although only part of the DHS grants package, EMPG recipients are asked to concentrate on the most likely hazards of their respective local jurisdictions, such as earthquake, hurricane, and flood. Through this program, FEMA provides states the flexibility to allocate funds according to their respective risk and to address the most urgent state and local needs in disaster mitigation, preparedness, response, and recovery. Under the program, DHS-FEMA expects these governments to achieve measurable results in key functional areas of emergency management. All states are eligible.[74] Local governments must apply through their state governments to FEMA. Funding under this program is ultimately used by emergency management organizations.

In 2006, congressional budget makers fashioning the fiscal year 2007 budget of the EMPG program cut funds to this long-standing federal program by approximately $13 million. These cuts came even after the glaring failures of coordination and collaboration during the federal, state, and local response to the catastrophic events of Hurricane Katrina. The president of the Mississippi State Civil Defense/Emergency Management Association pointed out that the program had been seriously underfunded for years and required significant additional funding just to catch up. He added that although it was always supposed to be a 50 percent federally matched program, Mississippi had been fortunate to secure even a 20 percent federal match.[75]

When asked in congressional hearings about the rationale for the EMPG cuts, then-Secretary Chertoff responded that the department preferred not to fund personnel and indicated that doing so was not "a federal interest." He further stated that "traditionally" the federal government did not fund personnel.[76]

The then-president-elect of the International Association of Emergency Managers (IAEM), also a director of Emergency Management and Homeland Security in a Kansas county, offered a retort to Secretary Chertoff. He remarked that the secretary had prominently displayed a copy of the National Plans Review requested by Congress and the president. He asserted the following

> The information and analysis contained in the N[ational] P[lans] R[eview] was due to the efforts of hundreds of EMPG-funded state and local emergency managers involving thousands of man hours—how is that not a Federal interest? Unfortunately, it appears there's a striking lack of understanding within DHS as to what Emergency managers do. We are in a people-intensive business. We're supposed to be the "honest brokers" who bring all the disciplines together to prepare for and to meet the crisis.[77]

The IAEM Government Affairs chairman, an emergency management director in a Maine county, added the following:

> To imply that the funding of personnel under EMPG is not a traditional function of the Federal Government is astonishing given that the EMPG program has been in existence since the 1950s. If

that's not a tradition, I'm puzzled as to what is.[78]

EMPGs were funded at about $332.5 million in fiscal year 2013. The fiscal year 2013 EMPG program supports core capabilities across the five mission areas of Prevention, Protection, Mitigation, Response, and Recovery based on allowable costs. Eligible applicants include all fifty states, the District of Columbia, plus commonwealth and trust territories, including the Republic of the Marshall Islands and the Federated States of Micronesia.[79]

The Assistance to Firefighters Grant Program

The Assistance to Firefighters Grant program, in cooperation with the U.S. Fire Administration (USFA), provides financial assistance directly to local fire departments, and this money pays for vehicles, equipment, and training that firefighters and emergency medical service personnel need.[80] The Bush administration budget request for fiscal year 2006 asked Congress to furnish $500 million in competitive grants to fire departments and emergency medical providers.[81]

The Metropolitan Medical Response System

The Metropolitan Medical Response System (MMRS) was developed after the 1995 Oklahoma City bombing. Its aim was to ensure that big-city police and fire departments had the training and equipment to care for the victims of a mass casualty event caused by nuclear, biological, or chemical attack.[82]

The MMRS helps localities do the following:

> [Provide] funding to write plans, develop training, purchase equipment or pharmaceuticals, and conduct exercises related to catastrophic incidents, whether terrorist or natural disasters. The purpose of the program is to help local governments improve their capacity to respond to mass casualty events during the first hours of a response or until other help arrives. The system also emphasizes enhanced mutual aid with neighboring localities.[83]

The MMRS at this writing resides in the U.S. Department of Health and Human Services (HHS).

Homeland Security Grants and their Effects at the Local Level

Since the 1980s the all-hazards approach to civil defense and emergency management has developed into a sophisticated system of intergovernmental relations. On September 11, 2001, the United States withstood its most catastrophic terrorist attack. Despite the tragic and heroic losses of a great many firefighters, police officers, and other emergency responders at the site of the World Trade Center, the existing broad-gauged intergovernmental system for disaster and recovery management worked well. The intergovernmental response to the terror attack on the Pentagon has been widely praised. However, the president and other policymakers concluded that prevention should be the focus in addressing future terror threats and attacks. Consequently, authorities introduced prevention as a phase in emergency management.[84]

Homeland Security Presidential Directive-1 (HSPD-1) of October 29, 2001, made terrorism a national security responsibility to be handled in a coordinated way by federal, state, and local officials. Although natural and technological hazards were still viewed as the responsibility of the local and state governments, with federal assistance, HSPD-1 defined terrorism preparedness as "a critical national security function" requiring extensive coordination across all levels of government.[85] Other homeland security presidential directives, federal laws, and a battery of federal grant programs were enacted. Collectively, these measures dictated to local governments the exact steps they were expected to take. These measures gave terrorism preparedness priority over preparedness for other types of disaster agents.

After enactment of the Homeland Security Act of 2002, it soon became apparent that the entire federal homeland security mechanism would be dominated by criminal justice officials. Terrorism prevention again took precedence over all other types of mitigation and preparedness.[86] Policymakers used homeland security funding to induce state and local authorities to join a system of reinforcing cross-jurisdictional information sharing regarding "persons of interest." Much of this work came at the expense of preparing for nonterrorism hazards, emergencies, and disasters. The presence of potential terrorists and their supporters, known as "persons of interest," was one of the few bases for rating a locality's vulnerability to terrorism, or "threat level," under the 2004 UASI.[87]

The SHSP, the UASI, EMPGs, Community Emergency Response Teams (CERTs), and the MMRS were at first separate grant-issuing programs with individual purposes. However, in accord with policymaker wishes, DHS consolidated these programs under the SHSP to ensure that all would need to operate with state government as an intermediary between federal and local governments. At first, homeland security grants did not directly permit funding of conventional disaster mitigation and preparedness. Although the 2002 Homeland Security Act references "major disaster" as defined in the Stafford Act, the core mission of the department is to prevent and prepare for terrorism. Other provisions of the act refer to the phases of the terrorism management cycle (prevention, response, and recovery) for which the department is responsible. Furthermore, the law declares, "the department shall also be responsible for carrying out other functions of the entities transferred to the department as provided by law." Because the law is vague, DHS has funneled its resources heavily toward its main priority: terrorism.

Mitigation has changed from public works activities to those related to criminal justice. Preparedness is defined in terms of surveillance capabilities. Owing to these reforms, local emergency planning has been subsumed within a nation-centered, president-dominated authority model.[88] For local emergency managers, compliance with homeland security requirements is both daunting and seemingly never ending.

The National Preparedness Goal aims to create "capability-based planning." This has three components: national planning scenarios, a Universal Task List, and a target capabilities list. The DHS developed a set of fifteen "planning scenarios" that encompass the range of "plausible" events that could pose the greatest risk to the nation.[89] These scenarios were intended to be used in evaluating the ability of a jurisdiction to manage a major disaster. Local officials were supposed to select those scenarios they thought most likely to occur in their areas and determine if their current capabilities would enable them to save lives, protect property, and revive their local economies.

The fifteen scenarios encompass disasters caused by the following:

- an improvised nuclear device
- aerosol anthrax
- pandemic influenza
- plague
- blister agent
- toxic industrial chemicals
- nerve agent
- a chlorine tank explosion
- a major earthquake
- a major hurricane
- a radiological dispersal device
- an improvised explosive device
- food contamination
- foreign animal disease
- cyberattack[90]

In practice, leaders are asked to count their jurisdiction's response resources and to engage in "tabletop" exercises playing each of these fifteen scenarios.

The 2006 UASI grant guidance changed the exercise from an evaluation of performance to a commitment to using future grant money to correct the deficiencies.[91] The annual exercise cycle topic is dictated by the state, which may select only from the scenario list provided by the federal government. The type of disaster agent selected may not be important for a given location; in other words, the participating UASI local government officials may be asked to conduct an exercise to address what for them is an extremely rare and unlikely event.

The purpose of developing a set of scenarios was to prompt consideration of a wide range of potential disaster events, with a goal of identifying "the critical tasks and capabilities that would be required from all sources in a coordinated national effort to manage major events."[92]

The Universal Task List was developed to describe "what tasks need to be performed," "who needs to perform them," and "how to perform them."[93] Individual governments are to use the list to document their existing capabilities to respond to the fifteen planning scenarios. They are expected to create a plan for the use of federal counterterrorism grant funds and locally available funds to address missing capabilities they discover in their planning. The Universal Task List contains an astounding 1,600 different tasks. Moreover, it is impossible for local government officials to maintain a correct list of all the resources needed and available to fulfill each task. Equipment breakdowns, personnel absenteeism, and shift-work schedules all prevent an accurate operational picture of the resources available in a community at any moment. Asking local officials to address 1,600 different tasks as part of the "All Hazards Taxonomy of National Preparedness Tasks," combined with associated planning and preparedness demands, is both daunting and unrealistic.[94]

Mitigation, a core phase of conventional emergency management, is located under "Protect" in the "All Hazards Taxonomy" and is stipulated as "Mitigate Risk to Public," but there is no provision for capital projects. The purpose of physical protection is subjugated under the criminal justice mindset of "Prevent." The UASI program uses evocative imperatives such as "Detect Threats," "Control Access," and "Eliminate Threats," all of which are focused on human suspects and weapons. Nothing in the taxonomy addresses preventing loss of life and maintaining economic viability in anticipation of natural disasters through mitigation measures like construction of protective structures or the application of building codes.[95]

From 2006 onward, the principal scheme for allocating federal preparedness funds to local governments was based on a combination of threat analysis and population. The funding distribution scheme also penalizes local emergency response groups when hazards they must prepare for fall outside the accepted threat analysis. For local governments without a significant terrorism threat, there may be little or no funding available for emergency

preparedness for disasters previously supported by federal funding assistance. Even those larger and more complex municipalities that have continued to receive homeland security funding have experienced some erosion in their nonterror emergency management capability.

In 2005, federal agencies undertook an evaluation of critical infrastructure based on the CARVER technique, developed by the DOD for "the military's target prioritization purposes."[96]Infrastructure was evaluated according to the following criteria:

Criticality. How important is the target? Importance is determined by the impact of its destruction on operations and whether or not substitutes or backups exist for the target.

Accessibility. How easily can a target be reached, either by infiltration or weapons?

Recoverability. How long will it take to replace or repair the target once it is damaged or destroyed? Vulnerability. How susceptible is the target, and its construction, to an attack?

Effect. What impact will the target's destruction have on the public, including psychological, domestic, and international ramifications? For instance, will it shake the public's confidence in the enterprise's systems, policies, processes?

Recognizability. How readily can a target be identified and not confused with other structures?[97]

These confidential site lists were developed by a committee within the executive branch of the federal government. The national list of critical sites was kept confidential but was used to estimate threat in the early days of the UASI program. Priority targets tended to be large stadiums and iconic structures (e.g., the Golden Gate Bridge, the Statue of Liberty, major sports stadiums, civic events); lower priority targets were high-tech and utility facilities. Each state was "assigned" a certain number of sites. The state could then contest the priority of the specific sites and substitute other locations the state deemed more critical, provided the number of sites assigned to the state remained the same.

Unfortunately, some infrastructure sites selected by DHS officials were chosen without consulting appropriate local officials. Local jurisdictions were invited to review the list only as a preliminary step in applying for another HSGP. DHS lack of consultation with local governments sometimes resulted in embarrassing gaffs; miniature golf courses and petting zoos were for a time identified as "selected sites" while high-tech companies were overlooked.[98]

Summary

Most disasters, including terrorist attacks, can be handled by civilian emergency responders. However, as mentioned, for some truly catastrophic disasters in which civilian authorities and nongovernmental organizations (NGOs) are overwhelmed, a military role is necessary. It may be that catastrophic disasters— events that overwhelm the capacity of state and local governments—require a large-scale military response. Use of the National Guard in domestic disaster response is not as contentious an issue as employing active-duty military personnel in disaster response. The establishment of USNORTHCOM has opened the door to more frequent introduction of active-duty military people in U.S. disaster management. The active-duty military plays a major role in matters of bioterrorism and weapons of mass destruction attacks, as well as in federal catastrophic disaster planning; this means that active-duty military are now integral participants in the national system of emergency management. The overlap of homeland security and catastrophic disaster management in the United States suggests that it would be both counterproductive and inefficient to bar active-duty military forces from assisting in domestic disaster management.

However, undermining or supplanting the authority of mayors and governors in a moment of national crisis would be a mistake. Rather than tinkering with constitutional relationships, Congress and presidential administrations should focus on creating mechanisms to get these officials the forces they will need to get the job done. "The greatest obstacle to overcome is not the legal barriers, but the tyranny of time and distance and the destroyed infrastructure, such as downed bridges and flooded roads, which might limit access."[99]

"All disasters are local" is an oft-repeated and regularly valid assertion of emergency managers and students of disaster. Nevertheless, the United States is a large nation, operated through a federal system. Emergency management capacity at the local level varies widely across the nation. Large cities and many localities in major metropolitan areas have experienced disasters before and have considerable ability to work all phases of disaster. Still, there is also a vast array of smaller counties, cities, towns, and villages; their emergency response capacity differs, ranging from high quality to merely adequate. A great many localities rely on volunteer firefighters, most of whom are unpaid. The experience, education, and training of these firefighters vary from outstanding to satisfactory. Moreover, the emergency management capability of law enforcement officers also varies dramatically across the nation. As mentioned, emergency management includes emergency response, but so too mitigation, preparedness, and recovery. Local government emergency response is only part of the game.

It is ironic that although state and local emergency managers from the 1950s through the 1990s right-fully complained of inadequate federal funding of their work, many states and local governments may well have ignored the need for full service emergency management had they not received federal funding, even federal dual-use, civil-defense-biased funding. The problem has changed today. Many state and local officials appreciate the dramatically scaled-up grant funding they have received in this post–9/11 homeland security era, but many also lament the federal preoccupation with terrorism at the expense of established emergency management, the hierarchical system for dispensing funds, and the immense paper- and computer-work burdens they must now shoulder.

The slowness of government's emergency response in the aftermath of Hurricane Katrina, particularly in areas of New Orleans devastated by levee-failure flooding and the ensuing blame game, sparked renewed interest in militarizing emergency response, much as happened after Hurricane Andrew.[100] However, top military officials are highly ambivalent about taking over civilian emergency management duties, although the military has been willing to play a more active role in short-term emergency response to homeland disasters, particularly through USNORTHCOM. Yet the military preoccupation remains that of national defense against threats posed to the nation by other nations or by stateless terrorists. The military culture and the civilian emergency management culture are in many ways highly incompatible. Emergency management has paramilitary participants, but most emergency managers, even most of those in paramilitary occupations, appreciate the need to work consultatively, cooperatively, and consensually. The Incident Command System (ICS) discussed in Chapter 6 implies a military model of decision making, but ICS is fundamentally used as a nexus of cooperative decision making applied to emergency response. The multiagency coordination system employed in emergency management is vital. Clearly,

ICS works satisfactorily for concentrated and localized disasters, but command and control regimentation of ICS becomes infeasible in catastrophic disasters covering large areas. It is then that the value of multiagency coordination and cooperation becomes apparent.[101]

The world of state and local homeland security is dramatically influenced by federal laws, rules, funding conditions, and administrative actions. U.S. public policy after the 9/11 terrorist attacks called for the nation to recruit, hire, and oversee state and local government homeland security and emergency management officials so they could better prevent and respond to acts of terrorism. One major result of this policy change was a profusion of federal homeland security programs and a dizzying array of grant programs with far-ranging and sometimes bizarre requirements.

Many of these programs dramatically affected state and local emergency management. Some of these programs represented arms of homeland security and disaster policy implementation. Some of these programs enriched state and local emergency management and law enforcement with major infusions of federal funds. However, some of these programs undercut or distorted state and local emergency management and law enforcement in controversial ways. Some of these programs also imposed massive stress on state and local emergency management and law enforcement officials.

Some studies have demonstrated that substantial federal and state aid to local government in particular policy areas can undermine local control of local government agencies.[102] In local emergency management, heavy federal and state subsidization, combined with conditions these other levels of government attach to the money dispensed, may potentially undercut local control of local emergency management. In other words, the greater the share of federal and state funding in local emergency management budgets, the greater the probability that a condition of dependency will evolve such that local emergency management becomes more an arm of state and federal emergency management and homeland security and less a locally controlled municipal function. Recruiting state and local government to fight the war on terror has had, and will continue to have, major effects on how disaster policy and emergency management is carried out.

Key Terms

Chapter 8 Globalization of Disasters[1]

This Astounding Photo shows Rampaging Tsunami Waters Swallowing Vehicles and Houses at a Bridge in Sendai City in Miyagi Prefecture. On March 11, 2011, Japan was Hit with a 9.0 Magnitude Earthquake, which then Triggered a 23-Foot-Tall Tsunami. The Waves Impacted Japan's Northeast Coastline within Minutes of the Earthquake Sweeping away Cars, Homes, Buildings, a Train, and Boats. According to the Official Toll, the Disaster Left 15,839 Dead, 5,950 Injured, and 3,642 Missing. The Japanese Government Estimates Costs will Exceed $309 Billion, Making it the World's Most Expensive Natural Disaster on Record.

(Source: Hiroshi Kawahara/AFP/Getty Images.)

EVERY NATION EXPERIENCES DISASTER AT SOME TIME AND IN SOME FORM. MANY EXPERTS anticipate that future disasters will be larger and more destructive owing to such factors as climate change and environmental degradation. Disaster vulnerability is also growing because the world population is increasing, accelerating the pace of urbanization. A massive share of the world's populace resides along coastlines vulnerable to a variety of weather- and waterborne hazards. The systems and infrastructure to sustain and nurture the world population are of uneven quality and durability. Many disasters befall developing nations that lack financial resources, infrastructure, adequate preparedness and response capability, and resilience.[2] Disaster forces and the effects of disasters often spill over or straddle borders, and disasters may easily overwhelm individual states, so they are sometimes difficult for many nation states to address independently.[3] Owing to the frequency and expansive

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effects of disasters and catastrophes, disaster management increasingly requires responses that are multinational or even global in scope. International disaster management involves not only the nations themselves but all relevant actors and loci of authority, be they multilateral and multilevel governmental, public, or private. Consequently, international disaster management, most particularly in post-disaster response and relief, constitutes a major domain of emergency management.[4]

The international community, development banks, and nongovernmental organizations (NGOs) must consider legal, ethical, and humanitarian criteria before they launch an intervention into disaster-stricken areas of other nations. Rising transnationalism and increased interdependency between developing and developed nations has given new urgency to matters of disaster management. The globalizing forces that have characterized the post–Cold War era—notably the massive movement of individuals, capital, goods, information, and technologies across borders—have resulted in ever-expanding relations between developing nations and relatively more developed nations and multinational corporations. For many developing nations vulnerable to major disasters this interdependence may produce negative, destabilizing effects.[5] Disaster damage often jeopardizes ongoing externally sponsored development projects. Developing nations lacking diversified economies or which are heavily dependent on export of single commodities or raw materials may discover that a disaster has not only undercut production but has seriously contracted the nation's gross domestic product. Many developing nations carry sizable debt burdens such that a major disaster imperils both their ability to repay and their creditworthiness.[6] Moreover, disasters in developing nations often trigger massive outflows of refugees who seek to escape zones of destruction and civil strife.[7] Disasters sometimes contribute to security threats from within or from forces in adjacent states. Disasters may contribute to conditions of state failure. Failed states often prove incapable of stanching the spread of radicalism, terrorism, and anti-democratic movements.[8]

Security and peace are linked to long-term, sustainable political and economic development. Therefore, the international community as a whole has a stake in preventing developing states from collapsing. By extension, this also entails helping developing nation governments cope with disaster both before and after they strike. Owing to interdependency and humanitarian altruism, the international community has a vested interest in assisting nations whose people and governments have experienced disaster.

In the international realm disasters are commonly categorized as natural disasters, technological disasters, or complex humanitarian emergencies (CHEs). Among these three, CHEs are often the most difficult to address. CHEs signify that a country or region is at or near complete breakdown of civil authority. CHEs sometimes involve ethnic conflict, displacement of population groups, market collapse, and mass starvation.[9] In a CHE, the success or failure of a disaster relief operation often rests on the degree of coordination, the fairness and equality in relief distribution, and whether the relief effort connects with (or at least does not impede) the country's reconstruction and economic development.[10] CHEs often coincide with natural disasters. For example, Mali, a nation of immense human suffering in recent years, is not only riven by ethnic and religious warfare but is also experiencing extended drought, which has added to the misery of many thousands of people.

Territorial sovereignty—the internationally recognized principle that a government should be the ultimate authority within the boundaries of its jurisdiction and should be free of unwanted external interference—may in some cases constitute a powerful obstacle to extending humanitarian assistance.[11] Leaders of some nation states, in times of disaster, choose to protect their national sovereignty even if this disadvantages many of their own citizens. Sometimes leaders of newly independent nations fear that post-disaster intervention by a rival state or a great power may bring about their recolonization or result in subjugation by a neighboring nation. For this reason, humanitarian assistance tends to be more successful when the leaders of recipient nations perceive it as offered by neutral parties or see it as undertaken by the international community collectively rather than by one or a few nations.

The international relief and humanitarian assistance mechanisms and tools of the United Nations are examined in this chapter along with the international disaster management system of the United States. The United States is a world superpower. The United Nations is an international organization of 193 member states, at the time of this writing.[12] The UN enforcement capacity and its resources flow from the permission and goodwill of its members.

Both the United States and the UN are constrained in their freedom of action and response capability. Interestingly, the UN, a confederation of nation states, and the United States, a federal system and representative democracy of fifty states (plus the District of Columbia and trust or commonwealth territories), must deal with a plethora of public and private actors, many having their own standards, procedures, and agendas.

The UN and U.S. agencies involved in international disaster relief are examined in this chapter, and the UN and U.S. disaster response and recovery mechanisms are compared, contrasted, and evaluated.

The U.S. Response System for Territories and Foreign States

The United States has a disaster policy and politics within its international relations. First, the United States has committed itself to serving the disaster management needs of its trust and commonwealth territories. Many Americans may be unaware that U.S. trust and commonwealth territories are eligible to request and receive presidential declarations of major disaster and emergency just as are all of the fifty U.S. states and the District of Columbia. Puerto Rico is a commonwealth of the United States, and the U.S. Virgin Islands is a U.S. trust territory. Both are located in the Caribbean, and both have emergency management systems. Guam, American Samoa, the Marshall Islands, the Northern Marianas, and the Federated States of Micronesia also maintain an emergency management capability. In the Pacific, American Samoa has been an unincorporated territory of the United States since 1899 and is administered by the U.S. Department of the Interior.

Today, the Republic of the Marshall Islands, the Republic of Palau, the Northern Marianas, and the Federated States of Micronesia are fully independent nations and are no longer American trust territories. However, these four nations and the remaining American family of trust or commonwealth territories remain eligible to receive presidential declarations of major disaster or emergency and all of the federal relief assistance these declarations convey. Providing disaster relief and long-term recovery aid to present or former trust or commonwealth governments is often a daunting logistical challenge and an exceedingly expensive proposition for the federal government.

Highly destructive hurricanes sometimes sweep through Puerto Rico or the U.S. Virgin Islands and cause massive devastation. Both governments have received a sizable share of presidential declarations of major disaster since 1953. In the Pacific, too, typhoons periodically devastate present and former U.S. trust and commonwealth states. Some of the most expensive "per capita" federal disaster declaration spending has flowed to U.S. trust and commonwealth states in the Pacific.

Sometimes hurricanes or typhoons destroy coastal infrastructure and jeopardize public water supplies. The U.S. military possesses air- and sea-lift capacity to ship food, water, clothing, building materials, and other commodities to these distant locations. Every eligible present or former trust or commonwealth territory of the United States is within either Federal Emergency Management Agency (FEMA) Region 2 headquartered in New York (includes Caribbean) or FEMA Region 9 headquartered in San Francisco (includes Pacific). Thus FEMA, as well as each responding federal agency, sends both representatives and aid to these governments in times of emergency or disaster.

The United States also has treaty obligations to offer disaster help to a great many of its neighboring nations in the Western hemisphere, which cannot be comprehensively reviewed here. Long-standing treaties, many of them predicated on defense pacts, obligate the United States to offer help to nations in Europe, Asia, South America, and Africa as well. The United States, then, is part of an international web of disaster response and emergency management. U.S. government organizations active in international disaster management both in its own territories and abroad are considered in more detail in the following section.

The U.S. Agency for International Development

The U.S. Agency for International Development (USAID), for many years an independent agency, is now again part of the Department of State. The agency is officially obligated to further U.S. foreign policy interests in expanding democracy and free markets while improving the lives of the citizens in developing countries.[13] Receiving a budget of half of one percent of the total U.S. budget, USAID is the chief U.S. agency in charge of overseas development. USAID extends assistance to countries recovering from disasters. Rooted in the Marshall Plan, which was designed to reconstruct Europe after World War II, and in President Truman's Point Four Program, USAID was authorized in the Foreign Assistance Act of 1961 and launched under an executive order issued by President Kennedy.[14] USAID symbolized the American recommitment to long-term foreign development, and it clearly separated U.S. military and nonmilitary international assistance programs. However, since 1961 the USAID annual budget has been an object of political controversy almost every year.

USAID receives guidance from the U.S. secretary of state. USAID also works closely with more than 3,500 American companies (300 of these companies are domestically based) and the Overseas Private Investment Corporation (a federal corporation).[15] The agency addresses issue areas as broad as economic growth, agriculture, trade, global health, democracy, conflict prevention, and humanitarian assistance. It provides assistance in sub-Saharan Africa, Asia, the Near East, Latin America, the Caribbean, and Europe/ Eurasia.[16] Within USAID, the Bureau for Democracy, Conflict, and Humanitarian Assistance coordinates the agency's response to emergencies in other nations. Within the bureau, a special office, the Office of U.S. Foreign Disaster Assistance (OFDA), manages all nonfood assistance directed to disaster victims.[17]

The Office of U.S. Foreign Disaster Assistance

Within USAID, the OFDA facilitates and coordinates U.S. emergency response overseas. The OFDA is divided into four units. These are the Operations Support Division; the Program Support Division; the Disaster Response Division; and the Prevention, Mitigation, Preparedness, and Planning Division.

The OFDA is authorized to respond to all natural disasters (earthquakes, volcanic eruptions, cyclones, floods, droughts, fires, pest infestation, disease outbreaks) and man-made disasters (civil conflicts, acts of terrorism, industrial accidents). The OFDA, besides furnishing immediate assistance, funds mitigation activities to lessen the effects of recurring disasters. It also makes available guidance and training intended to help those in other nations develop their own disaster management and response capacity.[18]

> When disaster strikes, OFDA sends regional and technical experts to the affected country to identify and prioritize humanitarian needs. In the wake of a large-scale disaster, OFDA can deploy a Disaster Assistance Response Team (DART) to coordinate and manage an optimal U.S. Government response, while working closely with local officials, the international community, and relief agencies. OFDA also maintains stocks of emergency relief supplies in warehouses worldwide and has the logistical and operational capabilities to deliver them quickly.[19]

U.S. Ambassadors Declare Disasters

When a U.S. ambassador judges that his or her posted nation's capability to address a disaster is over-whelmed, and if the nation's government requests international assistance, the ambassador or the chief of mission can issue a disaster declaration on behalf of the United States. This action initiates a set of U.S. emergency procedures and the ambassador can dispense $25,000 to $50,000 in immediate financial aid.[20] The USAID administrator then dispatches a team to the nation in question. Various response activities then transpire that are scaled to the gravity of the crisis. Such responses evolve from the immediate allocation of discretionary money through the embassy and from the immediate dispatch of regional advisers. Those authorities provide shelter and medical aid supplies. DART assesses the scope of damage, proposes a strategy, and estimates how much assistance is required and what it will cost.[21] The response team often provides logistical support to and coordinates the efforts of all actors and responders involved. These include the UN and other international organizations, NGOs, and governments. DARTs monitor and evaluate U.S. operations as well.[22]

In very great disasters, response management teams are formed in Washington and sent to the field to ensure optimum coordination between the various DARTs involved.[23] A special assistance team, or technical assistance group, composed of experts in fields as varied as agriculture and public health, often share their expertise with and assist DARTs and response management teams in their work.[24] The OFDA furnishes direct assistance and may follow this up by also offering a wide variety of project grants to public and private recipients. These are intended to help them develop and share best practices in disaster relief and mitigation.[25]

The Role of the Department of Defense and the U.S. Military

The U.S. Department of Defense (DOD) has crucial responsibilities in foreign disaster relief and response. A special office within the DOD, the Office of Peacekeeping and Humanitarian Affairs, has the job of leading or coordinating the U.S. military response to disasters beyond U.S. borders. Use of the U.S. military in disaster-stricken nations is sometimes controversial because for many the military's war-oriented missions do not comport well with the humanitarian aspirations of disaster relief. However, the military generally has excellent and necessary equipment, extensive training, and well-entrenched standards of procedure required to handle such operations. A request for military support by USAID/OFDA is usually transferred to the U.S. Department of State's Bureau of Political-Military Affairs before following the chain of command. International disaster relief by the military is designated as a Humanitarian Assistance Operation or Foreign Humanitarian Assistance, the latter being authorized by the DOD at the request of the OFDA.

Once on foreign soil, U.S. forces involved in a humanitarian assistance mission are limited by the principles of force protection and rules of engagement; in other words, they must ensure the security of their own military personnel as well as the security of civilians, facilities, and equipment, and they are restricted in their ability to engage in combat by certain rules ("no fire first," for instance). In conflict-ridden zones of intervention, the priority of the military forces often shifts from providing security and leadership to that of a strict mission of assistance through logistical, physical, and communications support, and the distribution of food and medical relief. During deployments, Humanitarian Assistance Survey Teams are often sent to evaluate the needs on the ground to ensure that the intervention is proceeding effectively.[26] A joint task force is usually set up on site in disaster zones to coordinate the activities of diverse military units and civilian agencies. The commander of this task force is in charge of creating a civil-military operations center. The center's job is to coordinate military-civilian activities, to serve as the connection with the overall response structure, and to provide the effective logistical support to other agencies and responders (e.g., the OFDA, the United Nations, and NGOs).

The DOD launched an extraordinary response to the December 26, 2004, tsunami in Southeast Asia, an event triggered by a 9.0 Richter magnitude earthquake. The catastrophic tsunami killed an estimated 225,000 people; fatalities occurred in eleven nations, most of them with coastlines on the Indian Ocean. The DOD supplied the logistic elements of the operation through the use of its airplanes, helicopters, military ships, and other equipment. USAID also coordinated the work of various civilian organizations.[31] In the Indian Ocean tsunami case, more than 15,000 military personnel contributed to the relief effort and were dispatched to the affected nations. More than 2.2 million pounds of supplies were sent by the U.S. military to the region, including 16,000 gallons of water, 113,000 pounds of food, and 140,000 pounds of relief supplies during the first twenty-four hours[32] (see the "History's Lessons" box for information about foreign assistance to the United States).

History's Lessons: The Katrina Case and Foreign Assistance

Hurricane Katrina struck in August 2005, devastating the central Gulf coast of the United States, causing billions of dollars in damage, and dislocating thousands of residents. As the storm's devastation and destruction were viewed and read about around the world, many people and officials of other nations decided to make offers of cash, services, and/or in-kind donations to the United States (see Appendix A). Moreover, a variety of international governmental organizations (IGOs) and international nongovernmental organizations (INGOs) also offered post-Katrina response and recovery aid in various forms (see Appendix B). For perhaps the first time since emerging as a post–World War II superpower, U.S. government leaders found themselves in the awkward position of deciding whether or not to accept offers of disaster assistance from the governments of other nations.

American acceptance of disaster assistance from other nations raised a host of issues. Would the United States accept aid from nations it had long-standing disagreements with? What if aid was offered by a hostile nation in a manner intended to embarrass the United States? If the United States accepted aid from one ally nation but not another, would this cause foreign policy problems? What about the nature of the aid itself? Should the United States reject aid offers from allies for things it did not need in the disaster response or recovery? Would American refusals to accept offers of help from various donor nations be considered a snub or an insult by the leaders of these respective nations? Even if the nature of the aid offered would measurably help in the response or recovery, were there federal, state, or local legal obstacles to the acceptance of this aid? Validating expert credentials, permitting foreign licensed physicians to practice in the United States, ensuring that foodstuffs or other commodities met U.S. inspection and standards, assuming responsibility and liability for the actions of well-meaning technical service providers unfamiliar with U.S. practices and procedures, and providing temporary visas to the potentially large influx of foreign helpers were just a few of the issues. In some ways U.S. leaders were humbled in the sense that they began to experience the same trepidation and worries as leaders of disaster-stricken developing nations.

Confusion about acceptance of aid even rose to the level of the presidency. On September 4, 2005, in the aftermath of Hurricane Katrina, President George W. Bush told viewers of *Good Morning America* on ABC that the United States could fend for itself. "I do expect a lot of sympathy and perhaps some will send cash dollars," the president said of foreign governments. "But this country's going to rise up and take care of it."[27] If the United States accepted outside aid for a catastrophe it suffered at home, would this be judged by the world as a sign of American weakness? Conversely, if the United States rejected all offers of outside aid, would this make American appear vainglorious? Would such a blanket rejection deter offers of outside help after a future catastrophe strikes the United States at home: a time when foreign assistance might be truly warranted?

The framework for managing domestic disaster was at the time the U.S. Department of Homeland Security (DHS) National Response Plan (NRP). The NRP established that the Department of State was the coordinator of all offers of international assistance.

In the course of its response to Hurricane Katrina, the U.S. State Department and FEMA could neither efficiently accept nor manage the deluge of foreign charitable donations. Those who developed the NRP used to guide governmental disaster management at the time anticipated that additional and specific planning would be needed for logistics, international coordination, and private sector coordination and donations management. In fact, each issue had its own support annex in the NRP. The annexes, however, provided little detail or operational direction and did not provide clear responsibility for the various roles and tasks referred to in the annexes. Even private sector firms inside the U.S. encountered problems when attempting to donate their goods and services to FEMA for Hurricane Katrina response efforts.

According to the U.S. Government Accountability Office (GAo), other countries made generous offers of assistance that the federal government had difficulty integrating into the ongoing response operations. Absent an implementation plan for the management of foreign material assistance, valuable resources often went unused. This frustrated leaders of many donor countries. Inadequate planning delayed the overall process of accepting and receiving disaster aid from abroad.[28]

Because the U.S. government had not received such substantial amounts of international disaster assistance before, ad hoc procedures were developed to accept, receive, and distribute the cash and in-kind assistance. In the absence of policies, procedures, and plans, the Department of State developed an ad hoc process to manage $126 million in foreign cash donations to the U.S. government for Hurricane Katrina relief efforts. As cash donations arrived, a National Security Council (NSC)–led inter-agency working group was convened to make policy decisions about the use of the funds.

FEMA officials told the U.S. Government Accountability Office they had identified and presented to the NSC working group a number of items that the donated funds could be spent on. The NSC-led interagency working group determined that use of those donated funds, once accepted by FEMA under the Stafford Act, would be more limited than the wider range of possible uses available if the funds were held and then accepted under the gift authorities of other agencies. In October 2005, $66 million of the donated funds were spent on a FEMA case management grant, and as of March 16, 2006, $60 million remained undistributed in the Department of State-designated account at the Treasury that did not pay interest.[29]

An example of in-kind foreign assistance problems is evident in the case of Switzerland, whose officials had loaded relief supplies onto an aircraft. FEMA requested that Switzerland send only the portion of relief supplies FEMA required to meet response needs. Because the generous contribution of supplies could not be unloaded quickly and repackaged into the smaller quantities in a timely manner, the U.S. Embassy in Bern and the government of Switzerland cancelled the entire flight. Another Swiss offer was received September 5, 2005, and not fully vetted by FEMA until September 14. In addition, a C-130 aircraft traveling from Sweden with a water purification system and a cellular network waited four days for flight clearance from the United States.

Similar problems played out in the case of foreign financial assistance. An estimated $854.5 million in donations had been pledged to the

United States. Yet there was no means of accepting, allocating, and disbursing funds that would also ensure transparency and acknowledgment of donors. The federal government eventually developed a process to accept financial gifts from foreign countries, but because there was no preestablished plan, implementation was a slow and often frustrating process. USAID sent liaisons to FEMA field locations on September 2, 2005, to coordinate the delivery of foreign disaster relief.[30] However, it took several days for the international aid staging area at Little Rock Air Force Base, Arkansas, to become operational. Before this staging area was established, foreign aid could not be efficiently unloaded and distributed. The federal government's inability to utilize its own resources, or those offered to it, caused great concern for the American public.

LESSON LEARNED: The Department of State, in coordination with the DHS, reviewed and revised policies, plans, and procedures for the management of foreign disaster assistance. In addition, the review clarified responsibilities and procedures for handling inquiries. As DHS and the State Department developed and implemented the administration's recommendations, they incorporated the following actions and procedures into their guidance:

1. Develop policies, procedures, and plans to help ensure international cash donations for disaster relief and assistance are accepted and used appropriately as needed.
2. Consider cash management options and place international cash donations in an account that would pay interest while decisions are pending on their use to maintain the purchasing power of those donations.
3. Maintain oversight of foreign donated in-kind assets by tracking them from receipt to disbursement, to reasonably ensure that assistance is delivered where it is intended.
4. Establish plans for the acceptance of foreign-donated items that include coordinating with regulatory agencies, such as the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA), in advance, in order to prevent the acceptance of items that are prohibited from distribution in the United States, regardless of waivers that might be established to expedite the importing of foreign assistance; these plans should also include the State Department collection of information on acceptable or unacceptable items in order to communicate to the international community what is needed or what cannot be accepted.

Emergency Management in other Nations

The United States is not the only nation engaged in emergency management. Virtually every developed nation has some system of disaster management. Many have disaster management agencies, and some of those predate FEMA.[33] Some have developed emergency management on a platform of civil defense, but a great many have advanced emergency management as a form of public safety or civil preparedness.

Many nations have had long experience with domestic or international terrorism and so have their own forms of homeland security.[34] It is also true that many developed nations support foreign aid programs and international disaster assistance activities.[35] Many nations belong to treaty organizations or regional alliances that also engage in international emergency management endeavors.

It is developing nations that often have limited capacity to engage in the full range of emergency management activity.[36] Poverty, dangerous patterns of human settlement, unsafe agricultural and infrastructure construction practices, low public awareness of disaster vulnerability, inadequate public warning and sheltering systems, poor transportation infrastructure, deficient power and communications systems, and other problems often confound emergency management in other nations. Many developing nations have little or no history of insurance use and so lack the ability to employ insurance as a disaster mitigation tool. Moreover, some governments of developing nations lack political legitimacy and the public support of their citizenry. Some governments do not consider emergency management a priority for their people and so lack the political will to respond to post-disaster needs. In many developing nations the chief governmental arm of disaster response is the military. In many nations with a history of military repression, the citizenry look upon the national military with suspicion and fear. When national military help is extended to disaster victims in such places, people fear that unfair arrest, exploitation, corruption, or even torture might ensue. Such problems have given rise to international disaster management activity based on humanitarianism. Much of this activity seeks to at least temporarily fill the gaps in developing nation emergency management capacity. In some respects, capable humanitarian assistance provided by other nations and international organizations in the post-disaster response and recovery work they do serves to highlight and diffuse emergency management principles and ideas to new places across the world.

A wide variety of development banks have taken a strong interest in emergency management, among them the World Bank, the Asian Development Bank, the International Monetary Fund, and the Inter-American Development Bank.[37] Moreover, a host of emergency-management–oriented multinational organizations have emerged. Among them are the Coordination Center for Natural Disaster Prevention in Central America, the Caribbean Disaster Emergency Response Agency, and the Pan American Health Organization. The North Atlantic Treaty Organization, the European Union, the Organization of American States, and the Southern African Development Community all have programs under way that promote emergency management internationally.[38]

The United Nations and International DisasTer Relief

With 193 member states, the United Nations constitutes one of the most experienced international organizational actors in the management of international disaster response and mitigation. UN agencies are generally involved on the ground in disasters and catastrophes. In the 1990s the UN reformed its capability to respond to disasters in order to better address the increasing complexity of emergencies. In 1987 the UN declared the decade of the 1990s the International Decade for Natural Disaster Reduction. By 1989 the UN had set up an office in Geneva, Switzerland, tasked with coordinating the implementation of the decade's activities across all UN agencies. In 1994 UN member states met at the World Conference on Natural Disaster Reduction in Yokohama, Japan, and developed a strategy and plan of action that embodied a vast array of emergency management principles. In January 2005 the UN convened the World Conference on Disaster Reduction in Hyogo, Japan, a meeting that included representatives from 168 governments and 78 UN specialized agencies and observer organizations. Some 161 NGOs were also represented at the conference. The Hyogo meeting yielded a framework for action and a plan to substantially reduce disaster losses of communities and countries by the year 2015.[39]

Words matter. In their information releases, publicity, and advertising activities, UN people are taught to recognize disaster victims as dignified human beings, not hopeless objects. UN officials do not use the word *victim* in their international humanitarian operations. They call them beneficiaries, recipients of aid, or disaster affected people/communities/individuals. *Victim* has a negative connotation that those people do not have any capacity or resources of their own, as hopeless objects, instead of capable individuals who simply need assistance.

The United Nations Office for the Coordination of Humanitarian Affairs

In 1998 the UN General Assembly established the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to be headed by the emergency relief coordinator. The coordinator acts as the primary adviser and, as the title implies, coordinates the work of the various relief organizations in humanitarian emergency responses. He or she does so through the Inter-Agency Standing Committee, itself composed of both UN and non-UN humanitarian leaders.[40] OCHA seeks to build consensus and share best practices among all UN partners, and it identifies issues arising from disaster management and response that need to be addressed. OCHA also amasses information from its Disaster Response System, a unit that monitors ongoing disasters, conducts post-disaster assessments and evaluations, and manages a bank of data made available to the international community of responders.

OCHA coordinates the field missions of an assortment of UN agencies. These agencies assess needs, mobilize resources by launching interagency appeals, organize donations, monitor the contributions, and issue follow-up reports to update various actors on post-disaster developments.[41] OCHA advocates conformity to humanitarian norms and principles in its dealings with partners and world governments. Foremost among those norms and principles is respect for human rights. On the matter of financial assistance, OCHA is in charge of the Central Emergency Revolving Fund. The fund operates as a cash reserve available to humanitarian agencies with cash-flow problems. OCHA is able to loan money, but reimbursement is expected within a year.[42]

When a disaster strikes, OCHA works in close cooperation with government groups and NGOs, including USAID/OFDA, to formulate a joint and coordinated course of action in each case. It helps set priorities and prevents overlap in the work of various agencies.[43] OCHA dispatches some of its personnel to provide on-site support to UN agencies. When needed, OCHA can set up a United Nations Disaster Assessment and Coordination (UNDAC) team. The team aids in the coordination of the relief effort, in the assessment of damage, and in gauging the response required. UNDAC teams help to harmonize the relief assistance made available by many of the UN organizations presented next.

OCHA responsibility is particularly crucial in the immediate post-disaster phase. It helps restore damaged communications and helps first responders work in harmony.[44] OCHA New York and Geneva provide surge capacity for its own field offices or when establishing a new field presence. OCHA does not provide surge capacity to other UN agencies because they have their own surge mechanisms.

A good example of U.S. and UN response to disaster occurred in November 2013 when Haiyan Typhoon struck the central Philippines as a Category 5 hurricane, which within its 60 mile-wide eye wall produced some of the highest winds at landfall ever recorded by meteorologists (see the "How Things Work" box).

The "How Things Work" box about the response to the disaster created by Typhoon Haiyan demonstrates well what both U.S. and UN officials do in their response to a catastrophic disaster. The U.S. Chargé d'Affaires to the Philippines declared Haiyan a disaster, thus triggering an official U.S. launch of relief activities. USAID and its OFDA swung into action mobilizing rapid U.S. relief assistance. The DOD responded with relief aid and logistical help, most particularly from the navy. Much of this was done in close consultation with the government of the Philippines and its National Disaster Risk Reduction and Management Council (NDRRMC). Note as well that the U.S. government endeavors to mobilize its own resources and distribute aid in combination with other nations. Also remarkable is USAID/OFDA financial assistance to UN response agencies.

What you have in all of this is a feverish attempt to carry out both a needs assessment and a damage assessment simultaneously. The fact sheet's heavy detailed information seeks to impart information about the true scale of the event in both physical terms and in terms of human suffering and loss. More than this, it is an attempt to demonstrate that the U.S. government not only cares about the disaster but is doing something about it by attempting to respond as quickly and as effectively as possible. The dense pack of information in the fact sheet is also sending a message to donors that their contributions are being directed to needs in a responsible manner. It

also infers that timing and urgency is critical, lives are on the line, and actions are being taken in the field. Finally, the fact sheet is a verbal snapshot of the many players, both people and organizations, involved in responses to disasters in other nations.

The United Nations High Commissioner for Refugees

Founded in the aftermath of World War II, the Office of the United Nations High Commissioner for Refugees (UNHCR) protects and aids refugees and internally displaced persons (IDPs).[45] The most basic responsibility of UNHCR is to guarantee refugees' fundamental rights, including their ability to seek asylum. It strives to make sure that no person is involuntarily returned to a country if doing so would subject that person to persecution or otherwise put his or her life in danger.[46] The UNHCR facilitates the necessary movement of masses of people, often refugees, during emergencies. It promotes education, health, and shelter programs and is expected to provide for the well-being of refugees. It manages the repatriation of people who freely wish to return to their home country and resettles those refugees seeking asylum to nations willing to accept them.[54] If refugees do return to their home countries, the UNHCR works closely with other agencies and organizations to prevent disrupting socioeconomic infrastructures of the home country and to facilitate refugee reintegration.

How Things Work: Typhoon Haiyan and Usaid

This is a typical status report regarding USAID/OFDA activities and mobilization in responding to the damage and suffering inflicted on the people of the central Philippines in the aftermath of Typhoon Haiyan.

THE PHILIPPINES

TYPHOON YOLANDA/HAIYAN FACT SHEET #2,

FISCAL YEAR (FY) 2014, NOVEMBER 12, 2013

NUMBERS AT A GLANCE:

CONTEXT: On November 8, Typhoon Yolanda/Haiyan made landfall in the central Philippines, primarily affecting East Samar and Leyte provinces. On November 9, U.S. Chargé d'Affaires, a.i., Brian L. Goldbeck declared a disaster in the Philippines due to the effects of Typhoon Yolanda/Haiyan. USAID/OFDA activated a field-based Disaster Assistance Response Team (DART) and correspondingly a Washington, D.C.-based Response Management Team (RMT) on November 9. The DART will conduct initial damage assessments in affected areas of the Philippines, liaise with other humanitarian and government actors in the country, and recommend appropriate response options. The RMT is a focal point to coordinate the USG humanitarian response, program relief activities, and provide support for the DART.[47]

USAID HUMANITARIAN ASSISTANCE FOR TYPHOON YOLANDA/ HAIYAN TO DATE IN FY 2014: IMPLEMENTING PARTNER ACTIVITY LOCATION AMOUNT USAID/OFDA AID

- USAID/Philippines Logistics and Relief Commodities, WASH Affected Areas $100,000
- USAID/OFDA Airlift #1 Logistics and Relief Commodities Affected Areas $574,770
- USAID/OFDA Airlift #2 Logistics and Relief Commodities Affected Areas $673,220

On November 12, the Government of the Philippines (GPH) and its National Disaster Risk Reduction and Management Center (NDRRMC) reported that Typhoon Yolanda/Haiyan had caused at least 1,798 deaths, affected an estimated 6.9 million people, and damaged or destroyed approximately 149,015 houses, as well as public infrastructure and agricultural land, across 41 provinces in the Philippines. The GPH and humanitarian partners expect the confirmed death toll and damage reports to increase in the coming days as transportation and communications systems are restored and as more information becomes available. However, while estimates of the death toll had reached as high as 10,000 in recent international media reports, Philippines President Benigno Aquino remarked on November 12 that the final toll will likely be approximately 2,000 to 2,500 deaths.[48]

As of November 12, 2013, NDRRMC announced that 582,303 people have been displaced by the typhoon and 792,000 people were evacuated in advance of Typhoon Haiyan. The same agency reported that as of November 11, 2013, some 1,798 deaths were associated with Haiyan.[49]

HIGHLIGHTS OF USAID/OFDA RESPONSE: On November 12, the first shipment of emergency relief commodities from USAID's Office of U.S. Foreign Disaster Assistance (USAID/OFDA) arrived in the Philippines. Distribution of the supplies will begin on November 13, with the assistance of the U.S. Department of Defense (DOD).

The U.S. Government (USG) is providing $20 million in immediate humanitarian assistance to benefit typhoon-affected populations, including the provision of emergency shelter, food assistance, relief commodities, and water, sanitation, and hygiene (WASH) support.

On November 11, the USAID Disaster Assistance Response Team (DART) leader and DoD Pacific Command (PACOM) staff conducted aerial assessments of heavily affected Tacloban city, Leyte Province, and neighboring affected areas, reporting the typhoon had damaged or destroyed up to 80 percent of homes and public infrastructure in assessed areas. Meanwhile, the DART deputy leader accompanied a GPH clearing crew to areas of Eastern Samar Province for the first overland assessment since the typhoon made landfall and observed catastrophic damage to an estimated 15 rural communities in the area.[50]

CURRENT SITUATION: On November 11, GPH authorities declared a state of national calamity due to the effects of the typhoon. International media reported widespread looting in Tacloban, and the Armed Forces of the Philippines (AFP) deployed an additional 500 to 800 soldiers to the city to augment local authorities' security operations and deter unrest. Soldiers killed two armed insurgents during an attack on an aid convoy en route to Tacloban city on November 12. The Government of the Philippines has also deployed armored vehicles, established checkpoints, and imposed a curfew to help restore law and order as relief operations ramp up in the city. Although international assistance has begun to arrive in the Philippines, logistical challenges, such as damaged roads, debris, and downed trees and power lines, are hampering relief efforts and impeding life-saving assistance from reaching populations in need. A lack of electricity in Tacloban has made landing planes carrying relief commodities impossible at night, according to international media.[51]

U.S. GOVERNMENT (USG) RESPONSE: The first USAID/OFDA shipment of emergency relief commodities—comprising

10,080 hygiene kits and 1,000 rolls of plastic sheeting—arrived in Manila and cleared customs on November 12. USAID/OFDA logistics staff is coordinating the transport of supplies from the warehouse to the AFP air base, where the commodities will be loaded onto U.S. military airplanes. U.S. Department of Defense (DOD) is scheduled to transport the hygiene kits and plastic sheeting to Tacloban on November 13 for onward distribution by humanitarian partners on the ground. A second identical USAID/OFDA-procured shipment is tentatively scheduled to arrive in Manila on November 14. On November 11, USAID/OFDA committed $750,000 to the U.N. Children's Fund (UNICEF) to support WASH cluster coordination and direct support for typhoon-affected populations, particularly women and children. DOD continues to work in cooperation with GPH officials to provide immediate disaster relief. PACOM has transported a number of personnel working on emergency relief efforts to Tacloban via military aircraft, including staff from the GPH Department of Social Welfare and Development, the U.N. World Food Programme (WFP), and members of the Emergency Telecommunications (ETC) Cluster—the coordinating body for ETC activities in the Philippines. A USAID/FFP airlift carrying 55 metric tons (MT) of emergency food products from Miami, Florida—capable of feeding 20,000 children under five years of age and 15,000 adults for five days— is due to arrive in Cebu Province on November 13. The food will be distributed by WFP and will target vulnerable populations in most-affected communities.

The Disaster Assistance Response Team (DART) continues to conduct initial damage assessments in affected areas of the Philippines and has established an Emergency Operations Center at USAID/Philippines, located at the U.S. Embassy in Manila. The DART is liaising with other humanitarian and government actors in the country and will recommend appropriate response options based on assessment findings, while the Washington, D.C.-based Response Management Team (RMT) is coordinating the USG humanitarian response, programing relief activities, and providing support to the DART. Additional USAID/OFDA staff in Bangkok, Thailand; Honolulu, Hawaii; and Washington, D.C., remains in frequent contact with the DART and humanitarian partners to monitor humanitarian conditions and coordinate relief efforts.

On November 12, the first shipment of emergency relief commodities from USAID's Office of U.S. Foreign Disaster Assistance (USAID/OFDA) arrived in the Philippines. Distribution of the supplies will begin on November 13, with the assistance of the U.S. Department of Defense (DOD).[52]

OTHER HUMANITARIAN ASSISTANCE: The international community is mounting a robust response to the disaster. However, logistical challenges, such as damaged roads, debris, and downed trees and power lines, continue to hamper relief efforts. Despite logistical challenges, the international community is rushing to provide life-saving assistance to people in need in the Philippines. On November 10, Japan deployed a 25-member medical team to the Philippines to provide assistance in the wake of the typhoon. On November 11, Canada sent a team of 200 people to assess humanitarian needs and assist with the disaster response, according to a government official. The Government of Norway has announced $3.3 million in humanitarian assistance for the Philippines, while the United Arab Emirates (UAE) has pledged $10 million in aid and development programs. The U.K. increased its funding for the typhoon response to nearly $16 million.

Additionally, several European countries, including Sweden, Belgium, France, Germany, and the U.K., are providing assistance in the form of shelter kits, water purification units, and communications equipment. WFP is transporting 44 MT of high energy biscuits to Manila for subsequent airlift to Tacloban city. WFP is also deploying mobile storage units, pre-fabricated offices, and generators from the U.N. Humanitarian Response Depot in Malaysia to allow aid workers to establish operational hubs at the Tacloban and Cebu airports. In addition, WFP information technology equipment, including digital radios, is en route from Dubai, UAE. On November 12, the International Federation of Red Cross and Red Crescent Societies released an emergency appeal for nearly $79 million, requesting cash, in-kind donations, and services to meet the needs of 100,000 families —or 500,000 people—for 18 months. Funding will support the distribution of emergency food assistance and increase access to safe drinking water and shelter. Also on November 12, the U.N. released a Humanitarian Action Plan for Typhoon Yolanda/Haiyan, requesting $301 million for the response, including approximately $76 million for food assistance, $46 million for shelter, $31 million for livelihoods, $22 million for WASH activities, and $21.5 million for health.

U.S. SUPPORT TO UNICEF IN WASHINGTON

Humanitarian Coordination and Information Management, WASH Affected Areas $750,000 for U.N. and NGOs Logistics and Relief Commodities, WASH, Shelter and Settlements Affected Areas $7,902,010.

TOTAL USAID/OFDA ASSISTANCE $10,000,000 composed of USAID/ FFP3 (FFP = Food for Peace) WFP (World Food Programme), Title II Emergency Food Assistance Affected Areas $2,250,000 and WFP Local, Regional, or U.S. Food Procurement Affected Areas $7,750,000.

TOTAL USAID/FFP ASSISTANCE $10,000,000

TOTAL USAID HUMANITARIAN ASSISTANCE TO THE PHILIPPINES FOR TYPHOON YOLANDA/ HAIYAN $20,000,000[53]

Year of funding indicates the date of commitment or obligation, not appropriation, of funds. USAID/OFDA funding represents actual or obligated amounts as of November 12, 2013. USAID/Food for Peace (FFP) funding reflects estimated value of food assistance.

News reports citing OCHA five days after the fact sheet release, on November 17, 2013, estimated that 13 million people were affected by the typhoon. The Philippine government says 9.8 million have been affected in forty-four provinces, 539 municipalities, and fifty-six cities. Of those affected, 4.9 million are children; 1.5 million are children under the age of five who are at risk of Global Acute

Malnutrition (GAM), a measurement of nutritional status used to assess the severity of a humanitarian crisis. The death toll from the typhoon became a source of contention itself as news reports claimed 4,200 were killed while the Philippine national government insisted deaths were 2,360

According to the Philippine disaster council 12,501 people were injured directly or indirectly from the typhoon. Some 1,186 are still missing, according to the council. About 3 million people have been displaced, with 371,000 people currently living in 1,086 evacuation centers and 2.7 million people displaced elsewhere. Over 70 percent of the displaced are in the six adjacent provinces of Aklan, Antique, Capiz, Guimaras, Iloilo, and Negros.

Infrastructure damage includes 494,611 homes with 248,176 destroyed and 246,435 damaged, according to the disaster council. Dr. Natasha Reyes, emergency coordinator in the Philippines with Doctors without Borders, said in a statement, "In Guiuan town, every single roof has been blown off in a town of 45,000 inhabitants.' She added, "Half of the city's hospital has been destroyed—no roof, destroyed electricity equipment, etc. It used to be a 50-bed facility with X-ray, operating theaters, everything. The wind destroyed the concrete." Some 628 schools sustained damaged, excluding in Eastern and Western Samar provinces, which have not reported yet, according to OCHA.

Aid and assistance to the Philippines has been significant. As of November 17, 2013, the number of people who have been assisted through food distribution, including rice, high-energy biscuits, and canned goods as of Friday, is 375,795 according to OCHA.

The U.S. Navy aircraft carrier USS *George Washington* can produce 400,000 gallons of freshwater (from saline sea water) in a day. The carrier arrived off Samar province on Thursday, November 14, 2013, carrying with it 5,000 sailors and more than sixty aircraft, according to the U.S. Navy. Along with the carrier and its team, various aircraft were also deployed to help deliver the clean water.

Rear Adm. Mark Montgomery, commander of the George Washington Strike Group, said in a statement, "One of the best capabilities the Strike Group brings is our 21 helicopters. These helicopters represent a good deal of lift to move emergency supplies around."

To be clear, only a person who crosses an international border can be considered a refugee and is protected under the provisions of the Geneva Conventions; the same protection does not apply to internally displace people, though these people have recognized rights under international humanitarian law.

The UNHCR has a long-term commitment to the cause of refugees. Its special mission, the United Nations Relief and Works Agency for Palestine Refugees in the Near East, has provided relief, health care, and education help to Palestine ever since the 1948 Arab-Israeli conflict.[55] The agency originally provided assistance to about 750,000 Palestinian refugees who had lost their homes or livelihoods or both. By the year 2000, it was working to help 3.7 million registered Palestinian refugees dispersed over areas of Lebanon, Jordan, Syria, and the combined West Bank and Gaza Strip.[56]

Since the Bosnia conflict, UNHCR has experienced internal struggles about whether to also take on aid to IDPs. This has been a controversy both within UNHCR and for the UN system as a whole. IDPs sometimes fall into a mandate gap, as a result of the nation in question. Sometimes UNHCR decides not to get involved.

So sometimes IDPs do not get UN help and sometimes this work falls to the UN International Office of Migration.

The United Nations Children's Fund

Formerly known as the United Nations International Children's Emergency Fund, the United Nations Children's Fund (UNICEF) was created after World War II to alleviate the suffering of European children. Since then its mandate has been expanded. UNICEF has an in-country permanent presence in many nations.[57] Thus, the agency may be able to respond rapidly to natural or man-made disasters from its offices in nations where it already has permission to operate.[58] The necessity of a swift response is highlighted by the especial vulnerability of new mothers and families with small children. Children and women caring for small children are often weaker members of their societies and are less capable of rebounding in disasters than others. During natural disasters or CHEs, UNICEF works with other relief agencies to restore basic services, such as food distribution, water, and sanitation. UNICEF officials also try to make available basic medical services and immunizations. UNICEF is empowered to advocate children's rights worldwide.[59] In conflict-prone areas, the agency has, with help, sometimes managed to negotiate cease-fires so as to provide humanitarian relief and to immunize children.[60]

UNICEF is well known for its excellent public relations. It has the best advocacy strategies in the UN system, though many do not realize that it is a UN agency. UNICEF has become an iconic household name, worldwide.

The United Nations Development Programme

The United Nations Development Programme (UNDP), created in 1965, has jurisdiction over many disaster-related activities. It has duties in disaster mitigation, prevention, preparedness, recovery, and reconstruction. The UNDP operating norm is that disaster vulnerability remains fundamentally connected to weak or absent infrastructures, the failure or inadequacy of environmental policies, and human settlement in high-hazard zones.[61] The mandate of UNDP is prevention, mitigation, preparedness and recovery—not so much relief and response (i.e., a mandate of other UN entities).

UNDP is a development organization, with a different organizational structure and management than that required for a response operation.

However, the UNDP early recovery team works with the response partners so that strong links are established and maintained between response and recovery through to mitigation and preparedness.

Because disasters hold the potential to quickly reverse a nation's previous progress or set a nation's economic development back decades, UNDP officials consider disaster mitigation and risk reduction to be priorities. The UNDP ties its response and recovery efforts to long-term and sustainable development. In 1995 it reorganized itself and created an Emergency Response Division, which accelerated the capacity of UNDP to respond to disasters. A response team is now routinely deployed to help coordinate relief and recovery efforts of other UN agencies and NGOs with the efforts of disaster-stricken national governments. The response teams also prepare comprehensive redevelopment projects in disaster recovery operations.

The UNDP has programs adapted to virtually all existing emergency circumstances. In 1997 the Emergency Response Division was granted more extensive duties over disaster and mitigation through the creation of the Disaster Reduction and Recovery Program. Through this program, the UNDP makes sure that its long-term development work includes the demobilization of combatants, land mine clearance, the reintegration of refugees and IDPs, and a plan for restoration of governance in the affected country.[62] The close collaboration of the UNDP with national and local officials often yields positive results. The UNDP has stimulated grassroots initiatives, promoted long-term resuscitation, and sought to improve people's living standards. It also facilitates recovery through the use of financial tools, notably microcredit to the poor in Central America. The UNDP often leads interagency workshops that identify potential risks, develop early warning systems, or build states' disaster response capabilities and programs.[63] In addition, the UNDP runs the UN International Strategy for Disaster Reduction Working Group on Risk, Vulnerability, and Disaster Impact Assessment. The group advocates standardized guidelines aimed at increasing emergency responder sensitivity to the social impact of disasters. It also operates a Disaster Management Training Program.[64]

The World Food Programme

The World Food Programme (WFP) is responsible for providing rapid and self-sustaining nutritional relief to the millions of victims of man-made or natural disasters.[65] Most nations that receive WFP aid eventually return to agricultural self-sufficiency. However, those nations that regularly fall victim to civil wars or ethnic conflicts usually also suffer food shortages or famine.[66] In cases of emergency, the WFP attempts quick response, but always with permission of the host government. WFP duties cover transport, delivery, and distribution of food made available by other UN agencies, other national governments, or NGOs. When called upon, the WFP joins in reconstruction and rehabilitation activity.

The WFP works in close collaboration with the Food and Agriculture Organization of the United Nations (FAo) of the United Nations, an agency that issues early warnings of potential food crises and assesses food supply problems. Both the WFP and the FAo are critical in meeting the needs of disaster victims living in rural areas and who may be farmers. The FAo facilitates the rehabilitation of food production through the support its Special Relief Operations provides to farmers. Many WFP programs operate under strict conditions and are tied to projects demobilizing combatants or clearing land mines.

The World Health Organization

The World Health Organization (WHO) is the UN central agency assigned to manage health and sanitation concerns throughout the world. The WHO uses its people, authority, and expertise to assess and respond to health needs in regions and countries affected by natural and man-made disasters. The WHO operates programs designed to help the governments manage first-aid supplies, improve their medical capabilities, and maintain epidemiological surveillance of disease. All of these purposes are important in the aftermath of disasters. The WHO works to eradicate diseases and reduce the effects of epidemics through campaigns of information and immunization.

U.S. Domestic Disaster Relief versus the U.S. International Relief System

Although there are many differences between the way the United States engages domestic disasters and international disasters, there are also striking similarities in the mechanisms and procedures used by FEMA and its foreign disaster aid counterpart USAID/OFDA. Both agencies are involved in activities extending beyond the mission of disaster relief; disaster management encompasses not only relief distribution but also preparedness, mitigation, and recovery work. In both the domestic and international cases, the scope of the disaster must be judged significant enough to overwhelm the authorities theoretically in charge of such activity. In other words, a government must be judged to have been overwhelmed or incapable of meeting the needs created by a catastrophe or disaster, such that help from outside is necessary. In the United States, state governments are generally expected to ask the federal government for help before the president declares a disaster or emergency, although exceptions are permitted. In foreign countries, UN organizations, as well as USAID and its OFDA, expect that their help will be officially requested by the established governments of the disaster-affected nations.

Once approached, both UN agencies and USAID/OFDA first assess the scope of the damages and the needs of the victims. Both sets of agencies have an all-inclusive approach as they try to maximize all resources and skills available, as they work in synergy with and try to coordinate the efforts of public and private relief organizations. Finally, both domestic and international relief systems often rely on the U.S. military to provide logistical, physical, and communications support, as was done in 2004 in the tsunami in Southeast Asia, again after America's Hurricane Katrina disaster in 2005, also after the Great Northeast Japan earthquake and tsunami catastrophe in 2012, and after the Haiyan Typhoon tragedy of the Philippines in 2013. Ironically, the U.S. military disaster responses inside America are sometimes just as controversial as U.S. military responses to disasters internationally.

When America deploys its military abroad, foreign leaders, fairly or unfairly, sometimes consider this evidence of superpower interference. On the domestic side, for many Americans there is a long-standing suspicion about the use of the military and the application of martial law (examined in Chapter 7).

United Nations Blue Helmets

The United Nations as an organization has no military "combat" forces of its own; it relies on the goodwill of member states and sometimes its "blue helmeted" peacekeeping soldiers, a force comprised of units contributed by certain member states. UN peacekeepers are defined as follows:

> Soldiers, police officers, and military observers from the United Nations' member countries. UN soldiers are paid volunteers from the armed services of various member states. All member states are invited to send volunteers, however, albeit with a few exceptions soldiers from the developing world do most of the volunteering.[67]

UN soldiers work alongside UN Police and civilian colleagues to protect personnel and property; maintain close cooperation with other military entities in the mission area; and work to promote stability and security. The UN claims its soldiers work with local communities and local military personnel to bring about greater mutual understanding and lasting peace. Protecting civilians is very often at the heart of the UN mandate and it is the Blue Helmets that are key to providing this security. All military personnel working under the blue helmet are first and foremost members of their own national armies and are then seconded to work with the UN. The UN has more than 97,000 UN uniformed personnel (military and police) coming from over 110 nations. They come from nations large and small, rich and poor. They bring different cultures and experience to the job, but they are united in their determination to foster peace.[68] UN military personnel can be called upon to do the following:

- Monitor a disputed border.
- Monitor and observe peace processes in post-conflict areas.
- Provide security across a conflict zone.
- Protect civilians.
- Assist in-country military personnel with training and support.
- Assist ex-combatants in implementing the peace agreements they may have signed.[69]

Troops typically are dispatched to peacekeeping missions for at least six months at a time, with the exact details of the deployment schedule left up to the country that sent them.[70] Blue helmet forces and related workers are counted on to provide the logistical and physical contributions necessary to carry out UN disaster relief and recovery missions.

The most common sort of UN peacekeeper is the infantry soldier. However, increasingly the UN needs specialized personnel who are referred to as "enablers." These skilled soldiers include engineers, who, for example, were able to help with the post-earthquake reconstruction in Haiti or who are building roads in the new nation of South Sudan. The UN also needs helicopters and their crews so as to extend their area of service and increase their visibility. Other specialist enablers include transport companies, communicators, and medical personnel. Modern peacekeeping operations are often very complex and place high demands on UN personnel. High levels of training are required before deployment, and the UN works closely with troop-contributing countries to provide help and advice. Troops must know what to do if they find themselves in an ambush, for example, and must be capable of responding appropriately, even robustly, if necessary.[71]

The UN can only deploy military personnel when there is a UN Security Council resolution authorizing them to do so. The Security Council will say how many military personnel are required, and then UN Headquarters will liaise with the member states to identify personnel and deploy them. This can take time—perhaps more than six months from the date of the resolution. As former UN secretary-general Kofi Annan said, the UN is "the only fire brigade in the world that has to wait for the fire to break out before it can acquire a fire engine." A standing reserve sounds logical, but it would be immensely costly to have a force of several thousand people on permanent standby. It would require training, accommodating, feeding, etc., and then might not even be used. Although it takes time, it is much more practical to generate the military personnel once the go-ahead has been given. This

also ensures we recruit personnel with the appropriate background, training and language skills.[72]

The Federal Emergency Management Agency versus the Office of U.S. Foreign Disaster Assistance

Returning to the U.S. context, there are also some fundamental distinctions regarding the use of FEMA and USAID/OFDA. The U.S. government is ultimately accountable to its own citizens, and therefore is more likely to pay a political price for failing to provide an adequate response to a disaster occurring on American soil (the bungled federal response to Hurricane Katrina as an example). As a result, the U.S. government tends to be more responsive to disasters occurring on domestic soil than to international disasters, as would be true in any nation.

The mission of FEMA is to protect and assist Americans in times of man-made and natural disaster; this is achieved through FEMA coordination of the work of federal departments and agencies working under the National Response Framework (NRF). The mission of USAID/OFDA is subordinated to the pragmatic goals of American foreign policy and interests abroad. Although the U.S. federal government needs to consider the needs, powers, and wishes of the state and local governments, federal intervention in disaster response and recovery has been allowed to grow, particularly in response to national concerns about the threat of attacks by terrorists inside the United States.

At the international level, relations between nation states remain profoundly affected by respect for national territorial sovereignty. The capacity and authority of USAID/OFDA abroad remains deeply limited by the U.S. government and by the UN-protected system of international relations. Often USAID/OFDA must work as simply one of many foreign relief agencies. The permission and goodwill of the host government remain conditions of its presence on foreign soil.

Internationally, USAID/OFDA becomes involved in a disaster response after it has received a request from the ambassador or chief of mission. Each request is evaluated according to precise criteria. As mentioned, often after consultation with the White House, an ambassador makes available a sum of up to $50,000 for disaster work to be spent at his or her discretion. In turn, OFDA dispatches its Disaster Assessment Response Team to evaluate the scope of the disaster and the range of unmet needs. In domestic U.S. disasters the president has the authority to approve a state governor's request for a major disaster declaration. For disasters outside the United States and its trust or commonwealth territories, the president may provide help to nations that request it through USAID and through the DOD.

Summary

Both the UN and the United States play a crucial role in international disaster relief. Their competencies both overlap and complement each other. For instance, sometimes the UN and the United States may not be directly involved on the ground in the same operation. The UN might address a nation's disaster through direct field operations while the United States provides aid indirectly by funneling funds and in-kind assistance from U.S.-based NGOs to the affected nation or to UN agencies. Sometimes the United States and the UN do work together and are present at the site of devastation, as occurred after the 2004 tsunami in Southeast Asia.

Comparing UN disaster assistance to U.S. foreign disaster assistance may seem inappropriate because the UN is an international organization of 193 members and is a supranational body, whereas the United States is a territorial-based sovereign state and a superpower. The organizations and disaster response structure of the UN seem better able to deal with disasters in the international realm than are U.S foreign disaster relief organizations. USAID/OFDA might respond faster if it limited the number of agencies involved in its response process, increased its flexibility in post-disaster activities, augmented and diversified its funding and the purposes to which it could be directed, and won government approval of major increases in its overall budget for international humanitarian assistance.

In some respects, U.S. strengths are UN weaknesses and vice versa. The United States is primarily responsible and accountable to its own citizens and their elected representatives. When the American polity judges U.S. international disaster relief programs as a low priority, the U.S. system of relief suffers. U.S. government relief programs, and the missions of its specialized agencies, are supposed to assist people in other nations and at the same time promote U.S. interests abroad. The rationale underlying U.S. humanitarian assistance is that by encouraging democracy and building structures favorable to sustainable political and economic development, the U.S. government gains and keeps allies and promotes other U.S. interests, among them the security of the United States itself. In providing disaster aid to the people of other nations, an American secondary agenda is to prevent recipient nations from political or economic collapse, to forestall their subversion by enemies of the United States, and to prevent the spawning of failed states that may evolve into rogue states.

Owing to America's agenda and perceived motives, leaders of some nation states decline American offers of disaster relief. Some are wary of U.S. ambitions; many leaders fear the consequences of U.S. intervention and worry that American "help" might destabilize their governing regimes. For these reasons and other reasons, they often judge UN help as less threatening, because it is coming from an international body founded on humanitarian goals: alleviating human suffering and promoting human rights and peace around the globe. The UN often projects a more neutral and legitimate image than does the United States. This legitimacy is reinforced by long-standing relationships that the UN has with most of its member states. To many in the international community, the collective and multilateral character of past UN interventions represents altruistic interests of a confederation of nations rather than the sometimes-insincere help of an individual state.

The UN is not without flaws. The organization has had great difficulty protecting its own officials, sanctioning the behavior and practices of its own "blue helmet" military, and achieving coordination of its internal agencies and offices. Though the UN is usually a capable overall coordinator of disaster relief and recovery programs it is also an organization poorly suited to separating combatants, forcefully protecting relief workers,[73] their aid stores, and their aid distribution networks. Moreover, the size of the UN budget (and therefore the UN capacity to intervene) depends on the benevolence of its member states and private donors.

In contrast, the United States has its own international disaster relief system, usually has the manpower to implement its missions, and has the capacity to use its military people and capabilities when it so chooses. In addition, the United States is one of the largest contributors to the UN, although the United States has at times also resisted paying its full assessment.[74] The U.S. government and the American people also donate funds and in-kind resources to many international organizations capable of dispensing disaster relief. The UN is in many ways dependent on U.S. help and resources. A disagreement between UN and U.S. officials in a matter of international

disaster relief has consequences for all parties. The United States remains a vital and fundamental player in the UN disaster response system.

Poor nations can rarely afford to engage in disaster preparedness and mitigation activities without outside help. Moreover, in some cases the leaders of certain poor and developing nations adhere to political ideologies and conduct domestic and foreign policies disliked by other nations. In the twenty-first century, the need to curb terrorism and the dissemination of weapons of mass destruction coexists with the need to advance the moral imperatives of peace and development. Disasters must be addressed by a wide array of state and nonstate actors. Together, the United States and the United Nations do have important stakes in assisting such nations and their peoples. Both the UN and the United States are essential actors in a multi-level/multilateral disaster-relief global regime.

UN and U.S. agencies collaborate with many states, agencies, NGOs, private corporations, and international foundations. Each possesses various resources and capacities to intervene and provide relief in disaster-stricken areas. With so many actors involved in the response and recovery process, both the UN and the United States have a stake in maintaining and improving coordination and communication among themselves and with others. Each needs to better allocate the funds of donors, avoiding redundancy and counterproductive outcomes. Effort and aid must be provided quickly, wisely, and efficiently so as to alleviate human suffering and advance healing, reconstruction, and economic welfare.

Key Terms

"Blue helmeted" peacekeeping soldiers [240]
Bureau of Political-Military Affairs [225]
Complex humanitarian emergencies (CHEs) [222]
Development banks [229]
Disaster Assistance Response Team (DART) [224]
Disaster Reduction and Recovery Program (of UNDP) [238]
Emergency-management–oriented multinational organizations [229]
Emergency Response Division (of UNDP) [238]
Globalizing forces [221]
Humanitarian assistance [225]
Humanitarian Assistance Survey Teams [225]
Office of Peacekeeping and Humanitarian Affairs [225]
Office of the United Nations High Commissioner for Refugees (UNHCR) [231]
Office of U.S. Foreign Disaster Assistance (OFDA) [224]
Territorial sovereignty [222]
United Nations Children's Fund (UNICEF) [237]
United Nations Development Programme (UNDP) [238]
United Nations Disaster Assessment and Coordination (UNDAC) team [231]
United Nations Office for the Coordination of Humanitarian Affairs (OCHA) [230]
U.S. Agency for International Development (USAID) [223]
World Food Programme (WFP) [238]
World Health Organization (WHO) [239]

Chapter 9 Recovery Assistance: *September 11th Victim Compensation Fund versus Conventional Relief*[1]

Attorney Kenneth Feinberg, Right, Answers Audience Questions about the BP Deepwater Horizon Oil Spill Fund Claims Process during a Town Hall Meeting at the Biloxi Community Center on August 23, 2010, in Biloxi, Mississippi. He Served as Special Master of this Fund, and he also was Special Master of the 9/11 Victim's Compensation Fund from 2001 through 2003, Both Jobs Requiring Solomonic Judgments and an Ability to Work with often Distraught, Angry, or Suffering People.

(Source: AP Photo/The Sun Herald, Amanda McCoy.)

A CORE COMPONENT OF U.S. DISASTER POLICY AND POLITICS is recovery assistance. In many respects the success or failure of governmental disaster policy and management is judged in terms of how quickly, fairly, and effectively aid goes out to survivors. Disaster victims themselves need a sense of direction in a world turned upside down and an answer to the following questions: What happens next? Where can I get help? What kind of assistance am I eligible for? How can I apply?

The standard or conventional model of disaster relief is administered by a variety of federal and state agencies; most notably if a state wins a presidential declaration of major disaster, the Federal Emergency Management Agency (FEMA) has an array of relief assistance programs. FEMA offers substantial assistance to individual

households and to state and county governments covered by a declaration. Since March 2003, FEMA has been part of the U.S. Department of Homeland Security (DHS), yet the "recovery function has remained essentially the same as it was before the establishment of DHS."[2] Thus, the conventional programs of FEMA—housing assistance, emergency minimal repairs, special needs, crisis counseling, unemployment benefits, legal services, and the like—remain in effect today and act in conjunction with other government disaster aid programs to provide federal assistance to disaster victims.

The purpose of this chapter is to examine the subject of victim compensation by the federal government after presidentially declared disasters and emergencies. The chapter incorporates the special case of 9/11 terrorism. Compensating victims after any disaster has much to do with what caused the disaster, what the circumstances of the disaster actually were, and whether existing systems of government post-disaster relief are sufficient to address the needs of the victims, which government decides it wants to address. This chapter is presented in three stages. The first is an examination of the conventional model of federal post-disaster assistance to disaster victims. The second is an analysis of the September 11th Victim Compensation Fund (VCF). The third is a comparison of the two.

No less important is "process." The process by which the conventional (or standard) model is carried out varies greatly from the process used in administration of the September 11th VCF. This chapter will compare and contrast the process used in the conventional model with the process used in the September 11th VCF case.

Federal post-disaster recovery assistance includes victim compensation but in highly conditional forms. After the 9/11 attacks of 2001, federal lawmakers considered the problem of 9/11 victim compensation and came to understand the limitations and shortcomings of both the conventional model of federal disaster relief and the deficiencies of existing federal terrorism victim compensation laws. Their remedy was the September 11th VCF.

One stated purpose of the September 11th VCF was to pay personal injury or death claims of injured survivors and relatives of individuals who died in the 9/11 attacks. Unlike the standard model of FEMA victim compensation, the September 11th VCF typically addressed economic losses incurred from the disaster instead of simply post-disaster recovery needs.[3] In some respects, the September 11th VCF used compensation as a means to address personal losses, not all of which were economic. Hence, the September 11th VCF stands as a truly exceptional case of federal post-disaster terror victim compensation.

The Conventional Model of Disaster Relief

Federal assistance activated by a major disaster declaration falls into three general categories—individual assistance, public assistance, and hazard mitigation assistance. As the names suggest, individual assistance covers aid to individuals, households, and businesses, whereas public assistance covers aid to public entities and some private nonprofit organizations.[4] Hazard mitigation assistance involves the Hazard Mitigation Grant Program, which funds projects designed to mitigate or reduce future losses in an area covered by a major disaster declaration.[5] For a given disaster, all categories of assistance may not be activated; some declarations warrant only individual or public assistance, not both.

Individual Assistance and Eligibility under the Conventional Model

According to FEMA, the Individual Assistance mission is as follows:

> To ensure that individuals and families that have been affected by disasters have access to the full range of Response and Recovery programs in a timely manner and that the best possible level of service is provided to applicants in the administration of these programs.[6]

Remember, individual assistance programs typically address post-disaster recovery needs, not losses incurred during the disaster.[7]

One of the major programs offered by FEMA in conjunction with the state is the Individuals and Households Program (IHP). The IHP was created under the Disaster Mitigation Act of 2000 (DMA 2000) (PL 106-390), which amended the Stafford Act, as a combination of two former FEMA programs—the Disaster Housing Assistance Program (DHAP) and the Individual and Family Grant (IFG) program.[8] When a major disaster occurs, this program provides aid to individuals in the area covered by the major disaster declaration.

There are two facets of the IHP—Housing Assistance and Other Needs Assistance. Housing Assistance primarily includes funding for temporary housing and repair to make damaged homes habitable; however, under rare conditions, grants for replacement and permanent housing construction may be issued as well.[9] Other Needs Assistance covers other disaster-related expenses, such as medical care, dental care, funeral costs, personal property replacement, transportation, and so on, for disaster victims who do not qualify for a U.S. Small Business Administration (SBA) low-interest disaster loan.[10] Assistance through the IHP is capped at $26,200 per individual or household.[11] Another FEMA program authorized under the Stafford Act is the Crisis Counseling Assistance and Training Program (CCP), which provides supplemental funding to the state "to help relieve any grieving, stress, or mental health problems caused or aggravated by disaster [one presidentially declared] or its aftermath."[12] Like the IHP, there are two facets of the CCP— immediate services and regular services. Immediate services are funding for a variety of immediate mental health needs, including screening, diagnostic, counseling, and outreach services for affected communities.[13] Regular services covers up to nine additional months of education, counseling, and outreach services. Funding for both facets of the CCP is handled separately, and states may apply for and administer either or both forms of assistance depending on their needs.[14]

Unemployment benefits may be provided through the Disaster Unemployment Assistance Program (DUA) administered by the state and supported by FEMA and the Department of Labor. Benefits and reemployment services are available to individuals who become unemployed due to a major disaster, beginning with the date the individual was unemployed and extending as long as twenty-six weeks after the major disaster declaration.[15] Most states stipulate that individuals must be able to "accept employment opportunities comparable to the employment the individual held before the disaster," yet interestingly, not all states require individuals to actively seek employment while receiving benefits.[16]

In addition to the IHP, the CCP, and the DUA, FEMA also provides free legal assistance to low-income disaster victims through an arrangement with the Young Lawyers Division of the American Bar Association. Legal assistance is limited to cases that will not produce a fee, including assistance with insurance claims, landlord/tenant problems, consumer protection matters, and replacement of wills or other legal documents that were lost in a major disaster.[17]

A different venue of assistance is the low-interest loan that was previously mentioned, provided by the U.S. Small Business Administration (SBA) of the U.S. Department of Commerce. Three types of federally subsidized disaster loans are in existence to help qualified homeowners and businesses: home disaster loans, business physical disaster loans, and economic injury disaster loans. Home disaster loans are issued to assist with repair and

replacement of damaged homes or personal property; however, homeowners are required to register with FEMA before applying for an SBA loan.[18] Business physical disaster loans are issued to assist with repair and replacement of damaged business properties, including inventory and supplies; and economic injury disaster loans provide recovery capital to small businesses and agricultural cooperatives.[19] Businesses may apply directly to the SBA for assistance.[20]

Although it appears that the jurisdictions of the IHP and the SBA overlap, it is important to recognize that most federal assistance is actually in the form of low-interest loans from the SBA.[21] Another crucial distinction between the IHP and the SBA is that a grant from the IHP does not have to be repaid, whereas a low-interest loan from the SBA must be repaid in full, plus interest, during a set interval.[22]

Finally, special tax considerations are often granted to individuals and businesses in an area covered by a major disaster declaration. For example, the Internal Revenue Service (IRS) allows casualty losses from a major disaster to be deducted on federal income taxes for the year of the loss or the preceding tax year.[23] Additionally, the IRS can expedite refunds to taxpayers living in affected communities.[24] Businesses may receive special tax exemptions from the Bureau of Alcohol, Tobacco, and Firearms; federal excise taxes are often waived for alcoholic beverages and tobacco products that were lost in a major disaster.[25]

Several crucial factors determine eligibility for individual assistance programs. Typically, individuals, households (which includes families), and businesses in an area covered by a major disaster declaration are eligible for assistance if they incur extensive damage and do not possess the resources to meet their recovery needs. In other words, "these programs are designed to provide funds for expenses that are not covered by insurance [or other outside assistance]."[26] Potential applicants must file a claim with their insurance company (if applicable) before applying to FEMA, yet even if disaster victims have insurance, FEMA may still be able to provide assistance under limited circumstances, such as documented delayed, insufficient, or denied insurance settlements.[27] In addition, individuals must be U.S. citizens, noncitizen nationals, or qualified aliens to be eligible for cash assistance programs, like the IHP; for noncash assistance programs, like the CCP, no stipulations of citizenship apply.[28]

Conventional Model Issues: How can I Apply, and what Happens Next?

Immediately after a major disaster declaration, disaster recovery centers (DRCs) are established in affected communities where individuals can discuss their disaster-related needs, learn how to apply for various types of assistance or check on the status of their applications, and learn more about mitigation measures to reduce future risk.[29] Federal and state agencies staff DRCs with "knowledgeable officials who provide recovery program information, advice, counseling, and technical assistance."[30] FEMA officials work to publicize available disaster aid programs through the Internet, news media, social media, and other venues so that information reaches all disaster victims in a timely manner. Most individual assistance programs have an application deadline of sixty days following a major disaster declaration.[31]

Here are the requirements from FEMA web-posted records:

> To officially apply for FEMA assistance, disaster victims must register online or over the phone at a special toll-free telephone number, 1-800-621-FEMA.[32] The following information is typically required of applicants—a social security number, current and pre-disaster addresses, a current telephone number, insurance information, total household annual income, routing and account numbers from a bank (for direct deposit if desired), and a description of post-disaster recovery needs.[33]

Specially trained operators at one of the FEMA National Processing Service Centers (located in Denton, Texas; Winchester, Virginia; and Hyattsville, Maryland) process all initial applications.[34] Then, inspectors contracted by FEMA schedule times to meet applicants at their homes, at which time applicants must provide proof of ownership and occupancy, and assess the extent of the damage. FEMA officials decide from the inspection reports if applicants qualify for individual assistance, typically within one month of the initial application. If approved, a grant is either sent by mail or directly deposited in an applicant's bank account, along with instructions about how to use the money; if denied, a letter is sent by mail detailing why the application was turned down and explaining the appeals process. Any decision may be appealed (eligibility, the amount of assistance given, etc.), and appeals must be mailed within sixty days for reassessment.[35] FEMA administrators audit approvals to ensure that aid is only granted to eligible individuals and is actually used for its intended purposes.[36]

The SBA has a separate application process for low-interest loans. Disaster victims who seek an SBA disaster small business or home loan must mail a completed application and all required documents to the SBA for consideration. SBA officials decide from the applications if applicants qualify for low-interest loans. If approved, the SBA directly contacts the applicant; if denied, the SBA automatically refers the applicant to FEMA.[37] Again, homeowners are required to register with FEMA before applying for a SBA loan, whereas businesses may apply directly to the SBA for assistance.[38]

This chapter compares conventional disaster recovery relief with the September 11th VCF, which allows us to examine two key questions. First, are single-case disaster event-specific relief funds warranted after mega-disasters or catastrophes? Second, is use of a Special Master to dispense compensation, as was used by the federal government after the 9/11 terror attack, a superior model in furnishing compensation to injured disaster victims and to the families and other loved ones of those killed?

The September 11th Victim Compensation Fund

As of July 2006, FEMA spent $528 million on aid to individuals and families involved in the 9/11 attacks. This sum excludes some $7 billion in payouts from the original September 11th Victim Compensation Fund (VCF), a program established by Congress, implemented by a Special Master and his staff, and organizationally linked to the U.S. Department of Justice. FEMA total payouts on 9/11 to New York State for all categories of aid totaled $8.7 billion as of July 31, 2006.[39]

The VCF is, first and foremost, a specific form of relief for victims of the terrorist attacks on the World Trade Center in New York City, the Pentagon in Virginia, and United Flight 93 that crashed in Pennsylvania on the morning of September 11, 2001. That Tuesday morning, nineteen members of Osama bin Laden's al-Qaida terrorist network easily evaded airport security and boarded two United Airlines and two American Airlines jetliners, and they then waited until the cabin door to the cockpit of each plane was opened or used hostages to force their way into flight decks. The first hijacked passenger jet was flown directly into the North Tower of the World Trade Center, and the second airliner crashed into the South Tower of the World Trade Center minutes later.[40] The third plane crashed into the Pentagon. The fourth hijacked craft was deliberately brought down by terrorists as passengers fought to regain control of the plane—this after passengers learned from their cell phones about the fate of the other three hijacked airliners. This fourth plane inverted and dove into an open field located near Shanksville, Pennsylvania. In all four cases no passenger or crew member survived.

Following the extraordinary events of 9/11, the VCF, a new but one-time-only avenue opened for those directly affected by the disaster. Also, the government's VCF employed a master model of compensation for the purpose of rapidly dispensing government funds as terror victim compensation, something unique and largely unprecedented. The master model of compensation was administered by one person, an appointed Special Master, who had the sole responsibility for receiving claims and making grant determinations. While this model has been utilized in other fields, most notably in making payouts to victims and relatives of asbestos-caused illnesses and cancers, the VCF represented its first application in federal disaster assistance, and it proved to be a very personal and controversial way to distribute disaster relief. For the first time family members or representatives of the lost individuals could meet face-to-face with one individual representing the entire government to express their concerns or plead for additional money awards—something families of those who perished in all disasters before or since could never do under conventional federal disaster relief. The VCF was controversial for many reasons but most notable was that one person, the master, was authorized to devise the rules for compensation, process individual claims, make awards in widely varying amounts, hear appeals and grievances, and all with little or no accountability.

Should the master model of compensation ever be used again? Is it too event-specific or too controversial to ever be applicable again? To answer these questions one must first understand the similarities and differences between the master model and the conventional model.

Creation and Purpose of the September 11th Victim Compensation Fund and Choosing a Master

Eleven days after the 9/11 attacks of 2001, the U.S. Congress passed a two-page statute that was a seemingly simple yet highly unprecedented measure. Passed with unanimous House and Senate votes, the VCF was established to pay the claims of injured survivors as well as the claims of family members of those who perished in the disaster. It was unique in at least two respects. First, the fund was predicated on covering post-disaster "losses" of individuals and families. Conventional disaster relief is grounded in compensation and restitution laws that address "needs" more than losses. There is an important distinction between losses and needs. Conventional disaster relief is comprised of several baskets of assistance available to survivors or victims who make application. Federal assistance dispensed from government programs in the form of grants, loans, or in-kind relief is aimed at meeting post-disaster needs of affected individuals, families, or businesses. For example, common post-disaster needs include money to pay for emergency minimal repairs to one's home, for alternative living expenses incurred by disaster displaced individuals and families, certain cleanup service and repair costs, and coverage of disaster-caused medical expenses of victims. Some of the programs covering needs do not require means testing of applicants and some of them do. While such programs help victims address important needs, these programs only partially cover losses. For example, loss of an income-earning spouse denies a family a breadwinner, especially when private life insurance proves inadequate to cover long-term spousal and family expenses. Another form of loss is that which comes from emotional pain and suffering for the families of those who perished. There are many forms of victim loss in a disaster, some dollar quantifiable and some not. All 9/11 survivors and the people victimized by the loss of loved ones were entitled to receive all conventional government disaster relief to which they were entitled, plus money from the VCF, which was intended to cover the complete range of losses to the extent money could compensate for loss.

Second, the VCF was to be administered by a "master," in this case Attorney Kenneth R. Feinberg, who receives the claims of petitioners and makes determinations regarding deservedness. The master may accept or reject petitions and determine the amount of claim money paid out to each petitioner. Masters are not uncommon in other realms. They may serve as court-appointed managers of funds that need to be dispensed to various litigants or eligible parties. However, the use of a master in dispensing federal relief to disaster victims was unprecedented until after the 9/11 terror attacks.

Compensating Victims of Terrorism

Before the creation of the fund, victims of terrorist attacks could claim compensation relief from two different statutes: compensation statutes and restitution statutes. The first compensation statute that provided federal assistance to terrorism victims was the Hostage Relief Act of 1980. This measure was enacted in response to the Iranian hostage crisis of 1979–1981. The law compensated the hostages for their suffering because the treaty which provided for their release contained a provision wherein no American hostage could seek civil tort damages in U.S. courts against Iran and these benefits were only eligible to those victims who were working for the American government at the time of captivity. These benefits included an interest-bearing savings fund for the allotment of the hostage's pay during his or her captivity; medical and health care expenses caused by captivity and not covered by insurance, exempting from gross income all compensation received while the individual was in captive status or hospitalized because of the captivity; exclusion of compensation from income tax if the employee died as a result of hostile action; deferral of taxes and penalties; authorization of spouse to file a joint return; and payments for educational expense of a spouse or child of a hostage.[41]

The second compensation statute was the Victims of Terrorism Compensation Act (VTCA), which, in short, paid each victim the sum of fifty dollars for each day of captivity. The third VTCA was enacted in response to the bombing of Pan Am Flight 103 on December 21, 1988; it paralleled the original law but with the major difference that this act was open to citizens and not just government employees.

In response to the April 19, 1995, federal office building bombing in Oklahoma City, Congress passed the Justice for Victims of Terrorism Act of 1996, which provided that the federal government make payments to states, public agencies, and nongovernmental organizations (NGOs) to help terrorism victims. The measure facilitated crisis response efforts directed to the victims. It also made it possible for surviving victims, and families of those killed in the attack, to participate in the trial proceedings of the alleged bomber or bombers.

The Victims of Terrorism Tax Relief Act provided tax relief for the families of the Oklahoma City bombing and later to families suffering loss in the 9/11 attacks and in the anthrax-laced letter attacks of fall 2001. This law does the following:

> [It] waives income tax liability of a victim, provides tax-free treatment of death benefits, shields the first $8.5 million of a victim's estate from the federal death tax, protects the first $3 million of the estate from state death taxes, facilitates payments by charities to victims' families, and provides the debt forgiveness that is not taxable.[42]

These compensation statutes taken as a whole are based on the principle that the federal government should come to the economic rescue of those who suffer at the hands of terrorists by assisting them financially.

Restitution statutes are premised on the principle that the wrongdoer must be punished. These statutes allow survivors and the families of decedents to bring suit against wrongdoers in court. In the interests of justice, U.S. laws readily provide civil remedies to victims of terrorism. There are three federal laws that allow victims of terrorism to obtain civil remedies against foreign perpetrators in federal court. The Torture Victim Protection Act of 1991 allows U.S. victims of human rights abuses abroad to sue in U.S. courts, a principle of jurisdiction that is relatively novel given that the acts were committed outside of the United States. The Anti-Terrorism Act of 1992 provides that a U.S. citizen injured by an act of international terrorism may seek damages in federal court against the organization or individual responsible for the act. There are also exceptions to the Foreign Services Immunities Act, which allow victims to sue foreign governments that sponsor terrorism.[43]

These restitution statutes coupled with the compensation statutes provided the basic legal framework for the VCF. There were many pressing legal needs in the immediate aftermath of the terrorist attacks. For example, U.S. commercial airlines calculated their insurance indemnification before 9/11 to be about $1.6 billion per airline,

which was estimated only to be enough to compensate claimants for the loss of two hundred and fifty people in total. However, the jetliner impacts killed thousands more than "the standard estimated passenger load of two hundred and fifty" that airlines could be expected to cover with their pre-9/11 insurance. In establishing the fund, the federal government responded to the perceived demands of the American people; the needs of those injured and those who suffered the loss of loved ones; and the need to protect United Airlines, American Airlines, and a host of other parties, including the federal government itself, that might be found liable or negligent for what happened in the terror attacks of 9/11.

September 11th Victim Compensation Fund: Victim Compensation Legislative Authority and Intent

The Air Transportation Safety and System Stabilization Act (PL 107-42), passed shortly after September 11, established the fund to "compensate individuals who were injured or relatives of individuals who were killed in the attacks."[44] In the law, the September 11th VCF was given a sunset date of December 22, 2003, an initial budget of $5.12 billion through 2004, and an administrator—a Special Master appointed by the U.S. attorney general.[45]

What is a Special Master?

In law, a Special Master is an authority, usually an attorney, "appointed by a judge to make sure that judicial orders are … followed."[46] Kenneth R. Feinberg is a Washington, D.C., attorney who specializes in settlement mediation and negotiation. Feinberg was appointed Special Master of the September 11th VCF by President George W. Bush through U.S. attorney general John Ashcroft. In his capacity as Special Master, Mr. Feinberg developed specific September 11th VCF regulations and procedures beyond those legislatively stipulated, and he did so in conjunction with the Civil Division of the Department of Justice.[47]

Mr. Feinberg also had the sole responsibility, and thus a substantial level of discretion, for receiving claims and making grant determinations by verifying eligibility and the extent of the loss experienced.[48] Another interesting aspect of the master model is that the Special Master was required to meet with any injured survivor or relative who so desired, giving a face to federal disaster relief—a single official to whom to express all concerns.[49]

Assistance, Eligibility, and Controversy

Remember, the stated purpose of the September 11th VCF was to pay personal injury or death claims of injured survivors and relatives of individuals who died in the 9/11 attacks. Unlike the standard model of compensation, the September 11th VCF typically addressed economic losses incurred from the disaster instead of post-disaster recovery needs.[50] In some respects, the September 11th VCF used compensation as a means to address personal losses, not all of which were economic.

Mr. Feinberg's book, *What Is Life Worth? The Unprecedented Effort to Compensate the Victims of 9/11*, recounted with personal insight his daily challenges and interactions with individuals, families, and government officials.

> One of the hardest parts of my job was dealing with questions about eligibility for the program from grieving families with relatives who died in the 1995 Oklahoma City bombing of the Murrah Federal Building. They asked questions like, "Why not me? Didn't my wife die from a terrorist attack? Where's my money?" And what about the families who lost loved ones in the 1998 terrorist bombing of the U.S. embassy in Kenya? What about the anthrax victims in the Washington, D.C. area? And the navy victims of the terrorist attack on the U.S.S. *Cole*? What could I say to the pregnant wife of *Wall Street Journal* reporter Daniel Pearl, when she requested a hearing seeking compensation for the death of her husband, killed by terrorists in Pakistan?[51]

According to Feinberg, the September 11th VCF made about $7 billion in payouts. Claim payouts ranged from a low of $500, for a person who lost a finger, to $8.6 million paid to a woman who survived the attack on the World Trade Center but who suffered third-degree burns over 85 percent of her body. The average award per death was about $2 million.[52] The average award per injury was $200,000. Only about two dozen people survived the attack with serious injuries, though many people filed claims for respiratory damage claims contracted during the cleanup at World Trade Center ground zero. While there was no maximum payout limit, a minimum payout limit existed for deceased individuals before deduction of collateral benefits—$300,000 for a single individual and $500,000 for a married individual or an individual with dependents.[53] Technically, there was no legislatively imposed limit on the financial resources available to the September 11th VCF.[54]

In the matter of eligibility, the September 11th VCF provided benefits to the following:

> Individuals present at the World Trade Center, Pentagon, or Shanksville, Pennsylvania, site at the time of, or in the immediate aftermath of, the crashes and who suffered physical harm as a direct result of the terrorism-related aircraft crashes [and] personal representatives of individuals … who died as a direct result of the terrorism-related aircraft crashes.[55]

An individual had to be physically present at one of the aforementioned sites within twelve hours of the crashes for disaster victims and within ninety-six hours of the crashes for rescue workers, and "physical harm" was defined as a physical injury treated by a medical professional within seventy two hours of injury or rescue.[56] Additionally, personal representatives of individuals, excluding representatives of the perpetrators of the attacks, who were on American Airlines Flight 11 or 77 or United Airlines Flight 93 or 175 were eligible for benefits under the September 11th VCF.[57]

Like the standard model of disaster relief compensation, the amount of assistance given was reduced by the amount that other private risk management benefits paid for the same thing. For example, the amount of private life insurance claims payments to cover a family member lost in the 9/11 attacks insurance had to be deducted from the amount the VCF awarded the family, although claimants could still receive other assistance from federal agencies like FEMA without deduction of those benefits.[58] Unlike the conventional standard model of

compensation, however, no stipulations of citizenship applied; undocumented aliens received aid if they met other eligibility standards.[59] In addition, foreign nationals who were parents of unmarried 9/11 victims were permitted to apply for VCF money.

Moreover, Feinberg recognized as eligible claimants immediate relatives of deceased 9/11 victims, including in particular spouses of same-sex marriages (whether legally recognized or not, though various forms of documentation were required). The conventional model could not provide federal post-disaster death benefits to a same-sex spousal partner until the *United States v. Windsor* Supreme Court decision of 2013, a decision that struck down the Defense of Marriage Act and legally required the federal government to provide benefits to married gay and lesbian couples. On top of this, Feinberg approved some, though not all, claims filed by individuals who maintained they were engaged and in a condition of impending marriage, at the time their betrothed perished in the 9/11 attacks.[60]

Until *United States v. Windsor* in 2013, the conventional model had little capacity to compensate in a substantial way the loss of same-sex spouses or the loss of an engaged premarital partner—with the exception of how FEMA defines a "household" in its IHP program.[61]

Finally, a unique component of the September 11th VCF was that claimants had to give up their rights to file or be party to a lawsuit against those complicit in the attacks.[62] The law that created the September 11th VCF stated that claimants relinquished the right to "sue the airlines, the Port Authority (of New York and New Jersey), which owned the World Trade Center, and any other domestic entity" in return for compensation.[63] Yet, according to Mr. Feinberg, 97 percent of all claimants decided to join the VCF instead of pursuing legal action; only 85 people chose to sue outside the fund, mainly for personal reasons instead of money.[64] In total, the September 11th VCF served the interests of 2,680 injured survivors and 2,880 relatives of individuals who died in the attacks.[65]

Process of Application

Application procedures of the September 11th VCF were very similar to those employed by FEMA under the conventional model activated under a major disaster declaration. Those affected by the disaster could visit claims assistance sites to obtain information or make application.[66] Individuals could also use an Internet application website or call a special toll-free help line to get help or set up an appointment at one of the claims assistance sites.[67]

Applicants to the September 11th VCF had to file a claim and provide all appropriate documentation. For example, those filing for personal injury claims had to provide documentary evidence demonstrating that they were at one of the sites at the time of the crashes (e.g., such as an affidavit from an employer), as well as certified medical records from the medical professional who treated their injuries.[68] For death claims, the process was somewhat more complicated. Personal representatives of those who perished had to submit a certified copy of a death certificate if the deceased's body or DNA evidence was found; if the deceased's body was not found, extra documentation placing the deceased at one of the sites at the time of the crashes was required.[69]

Additionally, personal representatives had to provide "letters of administration" appointing them as personal representatives of the deceased, and all individuals named as distributees had to undergo a Federal Bureau of Investigation (FBI) background check before receiving awards from the September 11th VCF.[70] Feinberg said the following:

> The Special Master and his representatives (namely personnel contracted by the [Department of Justice] DOJ from PricewaterhouseCoopers, an accounting firm) reviewed all claims and required documents against eligibility criteria.[71] Once claimants were found eligible and relevant information was gathered to calculate presumptive awards, claims were declared "substantially complete," at which point the Special Master had 45 days to issue presumed awards and 120 days to issue final awards. A DOJ audit revealed that the average amount of time spent processing substantially complete claims was 35 days, well within the imposed limit.[72] If a claimant accepted an award, the VCF authorized payment within 20 days; if instead the claimant appealed the decision, a hearing was scheduled with the Special Master.[73]

Feinberg said that the most difficult management aspect of the program stemmed from the statutory formula the master was required to use.[74]

First, the master had to calculate the economic loss of the victim. Had the victim not been killed or seriously injured on 9/11, what would they have earned over the rest of their expected life span? These projections involved determinations of how much an accountant at Marsh & McLennan or a sergeant at the Pentagon would have earned had they not been killed by terrorists on 9/11.[75]

More specifically, economic damages were calculated by determining an individual's post-tax income, along with employer-provided benefits, work/life expectancy, and wage/growth rate; and all this was used to project expected lifetime earnings.[76] Annual income was capped at $231,000 in these calculations.[77] The law creating the fund allowed for compensation of noneconomic damages. With the possible exception of court decisions in lawsuits filed by relatives of those lost in aviation disasters, there were few precedents to guide Feinberg's compensation decisions for noneconomic damages.[78] The presumptive amount given by the September 11th VCF for pain and suffering was $250,000, which was often altered by the Special Master for personal injury claims and considerably increased for death claims."[79]

Second, the master had to calculate pain, suffering, and emotional distress sustained by every victim and claimant of the disaster. The average payout per death was about $250,000. Feinberg related that many who died on 9/11

were trapped alive, were unable to escape, and were aware of their ultimate fate up to the end. Some 200 people fell to their deaths from floors above the impact zone in the burning North Tower.[80] Many people were trapped and killed by fire inside the damage zone of the Pentagon and in sections of the World Trade Center before the towers fell. Moreover, many spouses and children endured emotional distress during and after the period of the attacks. Not to be overlooked is the pain, suffering, and emotional distress of the passengers on the four hijacked aircraft. This was especially horrific for passengers and crew members of United Flight 93, which went down as passengers attacked the hijackers and sought control of the plane. Passengers and crew of the other three flights were aware of their hijack for a period, but passengers and flight attendants on United Flight 93 had learned from cell phone calls what had happened in New York and Washington while their hijack was transpiring. Emotional distress payments alone averaged $100,000 for a spouse and $100,000 per dependent.

Third, the master was required to deduct from calculated September 11th VCF awards the life insurance payouts received by claimants. Feinberg complained that this was a particularly painful and controversial task. In effect, families that had engaged in sound financial planning by paying premiums on life insurance policies were penalized relative to those who had not purchased life insurance for themselves or their spouses. Nonetheless, the Congress was not willing to disregard the standard tenet of federal disaster relief: federal disaster relief payments to individuals or families cannot duplicate payments from insurance policies for the same purpose.[81]

Collateral benefits included sources like life insurance, survivor pensions, and Social Security benefits, to name a few.[82] Claimants were expected to provide information about collateral benefits on the initial claim; however, September 11th VCF staff consulted other officials to validate benefits received or to check that all benefits claimants received were included in the tabulation of benefits.[83] Therefore, some various features of the September 11th VCF increased compensation for claimants—for example, the VCF did not deduct charity donations claimants received or tax benefits claimants took—other features decreased their compensation.[84] Overall, according to a Justice Department audit, "VCF personnel appeared to process claims in a manner that would maximize award payments. In the cases where discretion was used, we found justification for the amount of the award in the claimant files."[85]

Fourth, the master had the ability to exercise his own discretion in making awards once the first, second, and third statutory requirements (presented above) were met. In effect, the master was accorded Solomonic powers. He could temper or leverage disparities in the awards paid out to individuals and families from the VCF.

Attorney Feinberg volunteered that Congress failed to give him instructions or advice on a great variety of subjects. He said they did not specify "who could file a claim." Can a fiancée be treated like a spouse? In the case of same-sex partners, who is to be treated as a spouse if one of the partners was lost on 9/11 and the remaining partner elects to be treated as if he or she were a spouse? Feinberg answered his own questions by remarking that fiancées and same-sex partners often won September 11th VCF awards.[86]

Feinberg added that he encountered a great many family and extended family disputes over who should be judged as a surviving spouse or dependent. Feinberg lamented that only 20 percent of those who perished on 9/11 had wills. For the 80 percent who had no wills, Feinberg was forced to devise formulas for awarding compensation. He said that he "was not a family counselor" but he was often expected to decide conflicting claims of family members.[87]

What about discrepancies between payouts? When asked about unequal award amounts, Mr. Feinberg responded with the following:

> Awards are not paid out in equal amounts because the statute that created the fund provided that awards must be based in part on economic losses suffered in each case. The calculation of such economic loss necessarily results in different amounts being awarded to different families.[88]

However, Mr. Feinberg had a substantial level of discretion as Special Master, and he could take special

circumstances into account when determining awards even after the statutory requirements were met.

Master Feinberg disclosed that his biggest problem resulted from the congressional requirement that any family member of a victim or injured survivor of the 9/11 attacks was entitled to a face-to-face meeting with the master if they so desired. He reported that over 1,000 people elected to meet with him face-to-face. Congress wanted government to provide a "human face" for petitioners. This is a highly unique requirement.

Conventional disaster relief is provided through myriad channels and by a variety of actors. Many if not most disaster victims seek relief by calling the 800 numbers of federal or state agencies, as in FEMA tele-registration assistance operations. Many of the same or other victims meet with volunteers or agency representatives at DRCs set up near zones of devastation but usually for the purpose of asking questions and completing paperwork required to obtain relief. The "face of government" for many disaster victims is usually a government contractor, a local building inspector, a worker from a nonprofit volunteer organization dispensing government-provided assistance, a state agency representative validating losses or processing requests for disaster unemployment compensation, etc. Not one of these individuals is asked to address holistically the complete personal and economic losses of disaster victims in the manner the master was expected to do under the September 11th VCF.

Sometimes government provision is made for psychologists to offer counseling to victims after disaster. For example, in the months after Hurricane Katrina, a government-supported effort was launched in the New Orleans area to provide psychological counseling to children who survived family tragedies. However, in most cases disaster victims rarely get to meet a single government official or counselor to whom they can express all of their concerns about personal and economic loss. This may be one of the disadvantages of the conventional disaster model of relief, though as this account will show, the master model has a great many negatives as well.

Feinberg said that his face-to-face meetings "were a chance for families to vent about their personal loss." Many showed him wedding pictures, family photo albums, family home movies, pictures of children, and parents at religious ceremonies. A gentleman, whose wife had telephoned him from the 110th floor of the North Tower of the World Trade Center, played a tape of his wife saying goodbye. Feinberg noted that many people stridently insisted on the chance to meet with him simply to express their feelings and not to seek a larger award.

Attorney Feinberg sometimes emerged from these meetings and used his discretion to modify awards issued. He revealed that in his very first meeting with a claimant, a woman complained that the original award made to she and her children was insufficiently low. Feinberg asked her why she thought she deserved more than other applicants in similar circumstances. The woman then explained that her husband, who perished in the towers on 9/11, had been the principal caregiver and provider to her children as she battled a case of terminal cancer. She told Feinberg that she had only eight weeks to live, and she was deeply concerned about providing for the needs of her three young children. Feinberg disclosed that he doubled her award. He said the woman died of cancer within seven weeks of his meeting with her.

He related that many who met with him explained extraordinary circumstances of their loved one's death on 9/11. A seventy-year-old man told him how his son, a navy officer, successfully escaped the conflagration caused by the airliner's impact on the Pentagon offices where he worked, but then his son elected to reenter the burning and partially collapsed structure to look for his sister, who also worked in an office near the zone of devastation. His son died without finding his sister, though fortunately his sister escaped unharmed.

A woman recounted that her husband, a New York firefighter, had rescued some ten people seeking escape across the plaza below the towers. His supervisor told him not to make further rescues given how dangerous matters were becoming. The firefighter exclaimed that he had to continue regardless. On his last trip to the base of one of the towers, he was killed by the body of someone who had fallen from an upper story of one of the towers.

Feinberg also told the story of a New York firefighter lost on 9/11. His wife and three children filed for September 11th VCF assistance and got it. Shortly thereafter a lawyer called his office and added new information regarding the case. The lawyer said he had proof that the deceased firefighter had a second wife, who herself had two children. Apparently, neither wife was aware of the other. Feinberg said that both wives and all five dependents

were awarded September 11th VCF monies.

Was the Master Model Successful in the 9/11 Case?

Master Feinberg said the September 11th VCF program was a success in a variety of ways. The September 11th VCF was a taxpayer-funded alternative to torts. In other words, those who accepted payment from the VCF had to waive their right to file lawsuits against the federal government or any other party for any 9/11-caused loss. Feinberg said that 97 percent of all claimants joined the fund, and only 85 people chose to sue for relief outside the fund. Feinberg declared that the program was a statistical success in that 97 percent of claimants joined the September 11th VCF.

Kenneth Feinberg said that those who chose to sue for relief outside the September 11th VCF often had special agendas. He insisted that none of the people suing was really litigating for money. Some were suing because they believed their case would make the airlines safer. Some were suing because it was the dying wish of their loved one. Others sued because they believed their case would compel the Bush administration to release more information about what they knew before the 9/11 attacks, something Feingold said the 9/11 Commission has already largely done.

The Master Model and the British Petroleum Deepwater Horizon Oil Spill

Ironically, a victim compensation fund and master model scheme was used again in 2010, but this time by a private corporation convinced in part to do so by President Barack Obama. On April 20, 2010, an oil well erupted after a blowout and caused a catastrophic explosion and fire aboard the British Petroleum (BP) PLC-leased Deepwater Horizon offshore oil-drilling platform. Eleven platform workers were killed and 17 others injured when the Deepwater Horizon exploded. Owing to the explosion and ensuing conflagration, the entire platform sank to the bottom of the sea two days later. A damaged wellhead on the sea floor plus the malfunction of the blowout prevention system, opened a path for continuous discharge of crude oil to the sea in prodigious amounts over about a three-month period.[89]

BP executives conceded early that the firm would assume 100 percent of federal and state cleanup expenses. BP took the initiative after meeting with President Obama and established a $20 billion Oil Spill Liability Trust Fund through which to pay claims of parties that could prove they were damaged by the spill. Obama White House officials did not think it necessary that spill-damaged gulf states petition the president for declarations of major disaster under the Stafford Act. Instead, states, localities, and private parties were free to apply to the BP fund to cover their direct losses and oil spill response costs. The Deepwater Horizon Oil Spill Trust fund was led by Special Master Kenneth Feinberg.

As "a responsible party" in the spill, BP is required to pay out three different types of claims: bodily injury or illness; property damage; and loss of income claims, with the greatest demand for claims coming from the latter category. BP had hundreds of claims adjusters staffing twenty-two centers across the four affected gulf states, and they processed claims for the thousands of businesses and workers whose livelihoods were directly affected by the disaster.[90]

> To receive a Final Payment, a claimant was required to sign a release precluding the claimant from seeking further compensation from the Gulf Coast Claims Facility (GCCF), the Coast Guard, or in court from either BP or any other defendant companies allegedly responsible for the Oil Spill.[91]

The point of this example is to show evidence of government's now-regular temptation to encourage private parties to establish victim compensation funds and masters for human- or technology-caused disasters or emergencies. Such measures replace formal government victim compensation schemes, save taxpayer money, and provide government a source of reimbursement for whatever emergency response and recovery costs it incurs. It may well be that a September 11th VCF model is again used by the federal government for a future disaster in which terrorism produces massively deadly and destructive consequences, or for when a human-caused disaster produces consequences far beyond a responsible party's ability to pay.

Summary of the Models

Although the master model of compensation was generally well received in the aftermath of 9/11, the question remains as to whether it should be used after other mega-disasters producing extensive loss of life. Mr. Feinberg warned Congress that the September 11th VCF "was a good idea, but don't do it again."[92] Should his advice be heeded, or should the United States incorporate a version of the master model into its standing federal disaster assistance system?

Table 9-1 highlights major similarities and differences between the conventional model and the master model.

The master model contains some unique features that remedy several of the criticisms of federal assistance carried out through the conventional model. In a study about 9/11 government disaster aid, interviewees positively assessed the September 11th VCF while criticizing FEMA "for [its] slow response, inflexibility in adapting programs to the particular circumstances of the attack on the World Trade Center, and its poor coordination with charities."[94] This kind of criticism of the conventional model of compensation is typical—that after a mega-disaster, victims often tend to "get lost" in the flurry of activity of federal and state agencies and officials. FEMA goes to great lengths to publicize assistance options, yet many individuals still find it difficult to obtain and sift through relevant information to determine what kind of assistance they're eligible for in a time of crisis. A common problem is record and document loss. In the conventional model there is no single representative or ombudsman they can contact; disaster victims get shuffled from agency to agency, sometimes receiving conflicting advice about the best avenue to pursue given their particular plight. Confusion and inflexibility may slow or even stall the conventional model's recovery capabilities.

Table 9-1 Comparison of the Conventional and Master Models[93]

Table 9-1 Comparison of the Conventional and Master Models93

	Conventional Model of Compensation (Katrina)	Master Model of Compensation (9/11)
Federal program?	Yes	Yes
Legislative authority?	Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988	Air Transportation Safety and System Stabilization Act of 2001
Scope?	Major disaster granted a presidential declaration	9/11 attacks
Administrator?	Array of federal and state agencies (most notably the Federal Emergency Management Agency [FEMA])	Special Master with staff
Types of assistance?	Needs-based (housing assistance, crisis counseling unemployment benefits, legal services, etc.)	Loss-based (personal injury or death paid to Master determined eligible claimants)
Duplication of benefits allowed?	No, insurance claims cannot duplicate federal aid for the same purpose; they are deducted in tabulating eligible federal post-disaster assistance.	No, insurance claim payments cannot duplicate federal aid for same purpose and by law they are deducted from eligible federal post-disaster assistance (though conventional FEMA aid can be received with no offsetting deduction from September 11th Victim Compensation Fund [VCF] aid)
	Yes (for cash assistance) Foreign nationals and	No, foreign nationals and undocumented aliens were

Citizenship stipulations?	undocumented aliens ineligible for federal post-disaster cash assistance. Each may receive in-kind assistance.	eligible to receive September 11th VCF funding, the latter without penalty of deportation or other sanctions.
Applications?	Register online/by phone (toll-free help line) for FEMA, apply by mail for SBA	File claim by mail or e-mail, with supporting documents
Venues for help with applications?	Disaster recovery centers (DRCs), FEMA website, phone help lines	Claims assistance sites, website, toll-free help line
Method of payment?	Grants, loans	Grants
Appeals process available?	Yes	Yes
Audit process post award?	Yes	Yes
Marital issues	Legally recognized marriage only, "before 2013," no gay or lesbian marriage recognized in federal post-disaster relief (this changed in the 2013 *United States v. Windsor* case, when the U.S. Supreme Court struck down the federal Defense of Marriage Act). Married same-sex couples are, since the decision, entitled to federal benefits, including federal disaster assistance. How FEMA defined a "household" may have made some marital issues moot if the parties lived in the same domicile.	Legally recognized marriages, gay and lesbian state-recognized and common-law marriages (regardless of lack of legal recognition), and prenuptial engagements proven to the master, all eligible for September 11th VCF funding for loved ones of the deceased victims. These were independent decisions of the legal master.
Parental Awards for loss of adult sons or daughters	No, not eligible. Parents eligible only if the lost son or daughter was under age eighteen and unmarried.	Yes, if victim was unmarried, not engaged to be married, and one or both parents make application.

Source: Prepared by the author in his research of Hurricane Katrina and 9/11 victim compensation.

In the September 11th VCF case, the use of a Special Master gave victims a face, an actual person, through which to request federal disaster relief, to make complaints, to seek appeals, and to vent personal frustration. As Mr. Feinberg matured as Special Master, he acknowledged that he came to realize the extent of pain and suffering people experienced in the tragedy. As mentioned, regularly Feinberg augmented awards "through the exercise of the discretionary power given him in the VCF legislation."[95] This discretion allowed Mr. Feinberg to leverage disparities that would likely be overlooked in the conventional model. For example, recall the woman with three young children who asked that her presumptive award to be increased owing to her husband's death at the World Trade Center and because she was dying from terminal cancer.[96] This woman could meet directly with Mr. Feinberg, who could quickly authenticate her claim and take these special circumstances into account, and who had the power to increase her award. This case stands as a tribute to the sensitivity and flexibility of the master model.

Another argument is that the September 11th VCF was an appropriate response for the type of disaster the nation had experienced. One of the ultimate aims of terrorists is to divide governments from their citizens through fear.[97] However, a government can thwart this aim by demonstrating solidarity with disaster victims through compensation for losses incurred; therefore, the master model may actually serve a national security purpose.[98] Mr. Feinberg has "described the VCF as 'vengeful philanthropy'—showing the terrorists that they cannot hurt us

or divide us because our country will support the families of the dead and seriously injured."[99] Additionally, the September 11th VCF undoubtedly resolved claims more expeditiously and efficiently than the tort system would have been able to do. In a sense, this allowed the nation to move through the events and repercussions of the 9/11 aftermath with the sense that something was being done to address the needs of those affected by the disaster as rapidly and as fairly as possible.

However, the master model poses problems for federal disaster assistance. While the model certainly has its advantages, it also raises the question of whether or not so much power should be invested in one person. With sparse instructions from Congress, Mr. Feinberg was responsible for writing most of the regulations and procedures of the September 11th VCF himself. He then went on to implement regulations he had written, using them in making grant determinations. At congressional charge, he invested in himself authority akin to "the power of King George III; he [was] lawmaker, administrator, judge, and jury."[100]

Some of the more controversial regulations of the September 11th VCF may have demonstrated a lack of understanding on Mr. Feinberg's part about the extraordinary circumstances of 9/11—an understandable shortcoming given that Mr. Feinberg was not present at any of the sites on or immediately after the time of the attacks. For example, requiring that a physical injury must be treated within seventy-two hours (originally twenty-four hours) to be eligible for compensation, "seem[ed] like a perfectly reasonable rule unless you were in New York City the week of the attacks."[101] One injured survivor who did not receive aid from the VCF stated the following:

> Mr. Feinberg and the VCF must have the medical profession in turmoil by declaring that if medical attention was not immediately found, the injured person could not have been injured badly enough.… You did not go to the hospital because you did not think you were hurt badly enough, maybe [you were] a little scared to go outside into a WAR ZONE.…[102]

Congress eventually stepped forward to address this concern. On December 22, 2010, Congress passed the James Zadroga 9/11 Health and Compensation Act, and on January 2, 2011, President Obama signed the measure into law.

> James Zadroga was a New York police detective who worked for hundreds of hours on the smoldering pile at ground zero after the Sept. 11 attacks, and whose subsequent death led to a fierce public debate about the health problems suffered by rescue workers after 9/11.[103]
>
> One of the provisions of the Zadroga Act that impacts active firefighters [and other responders], as well as retirees, is the reopening of the Federal WTC Victim's Compensation Fund (VCF). The original VCF was only available to members who were present at the attack sites at the time of the attacks or immediately thereafter, and suffered physical harm or death as a result. In order to be eligible, the person would have had to receive medical care for the injury within 72 hours of the attacks. If rescue workers failed to seek medical care within 72 hours the VCF excluded them, even if they later became ill as a result of their participation in the recovery and cleanup operations.[104]

The Zadroga Act defines the "immediate aftermath" more liberally. The time frame begins with the attacks on September 11, 2001, and ends on May 30, 2002. The act is designed to include rescue, recovery and cleanup workers. It was approved with an infusion of up to $3.2 billion of new September 11th VCF spending authority, and the program will expire in 2016. Feinberg is not master of the reopened September 11th VCF; a new official has been appointed to the job.

PROS and CONS of the Special Master and Master Model

Will it be possible to find a person as qualified as Attorney Feinberg to serve as a Special Master in hurricane disaster relief for example? Amazingly, Feinberg was recruited by the BP Corporation to serve as Special Master of its Deepwater Horizon Oil Spill Trust fund over 2010 and 2011 (mentioned earlier). Before that, in 2007, he had served as Special Master of the Virginia Tech Hokie Spirit Memorial Fund, established to compensate families of thirty-two slain students and faculty, as well as twenty-seven injured, all attacked by a lone assailant on the Blacksburg campus of Virginia Tech months before. Feinberg "described the Virginia Tech disbursements as a 'gift' from the more than 20,000 individuals and corporations who donated to the fund, which the university established after being flooded with requests from people wanting to help in the days after the shootings."[105]

Few would contest that Mr. Feinberg did an admirable and efficient job administering the September 11th VCF. However, his field of expertise, even after the mass tort cases he handled before 2001, could not fully prepare him for the assortment of responsibilities he would face as September 11th VCF Special Master.[106] For instance, Mr. Feinberg was self-reportedly not a family counselor, but he was often left to settle family disputes over claims as a type of mediator or arbitrator and mental health counselor.[107] The conventional model of compensation draws on many officials with differing skills so that broad aspects of disaster aid are covered. However, few recipients of federal-state-local post-disaster aid receive government-sponsored counseling beyond what family services and mental health authorities are able to provide.

Moreover, the pool of September 11th VCF claimants never exceeded 3,000. However, in catastrophic natural disasters, Hurricane Katrina an example, many thousands of people are involved and likely to seek compensation. Would it be infeasible to use a single Special Master to address the wide assortment of losses suffered by these hurricane survivors or perhaps by oil spill damage claimants? Remember, the September 11th VCF was compensation for injury and loss of life. While victims of catastrophic natural disasters often manifest need for compensation to cover injury and loss of life, so, too, do they seek help to repair physical destruction of their homes, replacement of the content of their homes, replacement of their cars, coverage of their uninsured medical losses, unemployment assistance if the disaster affected their employer or their livelihood, the costs of displacement from their homes, and a host of other needs. This dizzying assortment of needs and the prodigious numbers of applicants would quickly overwhelm a Special Master and his or her staff, even if many Special Masters were appointed (something likely to raise of host of new disputes as different masters would issue different rulings).

Additionally, the September 11th VCF master model case focused mostly on economic losses instead of post-disaster recovery needs. By providing compensation for various losses experienced by disaster victims, the federal government stepped into the treacherous territory of assigning "values to lives." Though the statutory formula used in the September 11th VCF to make grant determinations was supposed to bypass value deliberations, "those who received less [inevitably] wondered why the lives of their loved ones were less valued than those of others who made more money."[108] Paying different amounts to different victims may have actually increased the divisiveness that the September 11th VCF was intended to prevent. Also, the September 11th VCF did not cover all losses experienced by disaster victims; losses due to physical injury were included but losses due to psychological injury were notably excluded. This exclusion is particularly controversial since psychological effects can be every bit as devastating as physical injuries, and were likely widespread after 9/11. As one survivor diagnosed with post-traumatic stress disorder (PTSD) stated, "We all hurt every day. We'd like to be recognized and helped. People … are losing their homes, their marriages are failing, some are on welfare, and others are living off of food banks."[109]

Another problem with the master model is the possibility that it may be applied arbitrarily in the future—utilized in some disasters but not in others. It is widely acknowledged that while the September 11th VCF created a precedent, "there is no guarantee that similar programs will be adopted" in the future.[110] The September 11th VCF was criticized for failing to extend its compensation scheme retroactively to past events. In one study, those interviewed did not dispute the following:

The tragic losses [were] inflicted on those families whose loved ones were in the World Trade Center or the Pentagon or on one of the airliners that crashed on 9/11,… [but] some interviewees noted that previous victims of terrorist attacks in the United States received no comparable set of benefits.[111]

Many people wonder why the master model would be applicable only for 9/11 and not for other terrorist attacks. Yet if Mr. Feinberg's recommendation is followed, another post-disaster VCF will never be formed. Mr. Feinberg believes that the events of 9/11 were unique enough from the perspective of the nation to warrant utilization of the master model.[112] Future terrorist attacks may or may not merit use of the master model. However, according to Mr. Feinberg, a fund cannot be justified by a type of disaster.[113]

Summary

The Special Master model contains several features that may be superior to those of the conventional model of federal disaster relief. However, it may be asking too much of Congress to decide which disasters warrant a separate fund and which do not. The system of presidential disaster declaration issuance was established in a 1950 law by Congress. It was as an admission by that body that it cannot and should not decide on which disasters warrant federal disaster assistance and which do not. If the Special Master model is ever to be used again in the aftermath of a national catastrophe, it must be planned out ahead of time for the circumstances to which it will apply. Otherwise, claims of hypocrisy or unfairness will emerge. Some critics of the September 11th VCF believe it was mainly an act of politics—an attempt to avoid accusations of poor preparedness at all levels. As one relative of an individual who died on 9/11 stated, many families "feel that [the VCF] is just a cover-up to bail out the airlines, to bail out the Port Authority, to bail out New York City. It is for them, it is not really for us."[114]

Is it worthwhile to consider incorporating for the case of terrorism consequence management a version of the Special Master model into the standing federal disaster assistance system? Certainly terrorist attacks against the United States have already been treated differently than other forms of natural or human-caused disasters. Some nations maintain "[t]errorism insurance or compensation programs … where no program for other catastrophic risks exists."[115] While there were controversial aspects of the September 11th VCF, the master model proved to be generally well received, consistent with national security needs, and useful for allowing the nation to heal and ultimately move on. Obviously, use of Special Masters and victim compensation funds has been used by corporations as a full or partial remedy in liability actions. The Virginia Tech Hokie Spirit Memorial Fund utilized a Special Master to pay out charitable contributions to surviving victims and to families and loved ones of those who were murdered, but it was not intended as a method of resolving liability for loss.

On and after 9/11, Congress sensed that the public would support an extraordinary victim's compensation fund. In one sense the fund was a visceral public expression of sympathy for 9/11 victims expressed through the federal government itself. Congress and the public judged 9/11 to be a truly unique event: an abominable act of war by nonstate terrorists, a devastating assault on the American homeland and the American psyche, a disaster inside the United States with an extraordinarily high death count, hugely media reported epiphenomenon that vividly portrayed the plights of families impacted by 9/11, and more. The September 11th VCF, employing the master model, sought to provide victims with especial relief. It was an act of healing. It was a political response by a government fearing that it may be embarrassed by revelations of poor preparedness, inadequate intelligence, and failures of response. As indicated, the September 11th VCF also sought to protect from lawsuit the aviation industry, the airlines, parties responsible for aviation security, responders, and the government itself.

In many ways, extraordinary changes were made in the system of federal disaster relief paid out to victims of Hurricane Katrina. For example, some forty-four states were granted emergency disaster declarations by President George W. Bush so that a sizable portion of their costs incurred in temporarily relocating and hosting Gulf Coast Katrina evacuees and displaced individuals and families could be reimbursed by the federal government. FEMA extended rental support to eligible evacuees for a time. Massive reconstruction support flowed to the Gulf Region from the federal government. Conventional federal relief to individuals and families who survived Hurricanes Katrina and Rita was augmented in other ways as well. Nevertheless, the conventional relief system lacks many of the features of the September 11th VCF.

Attorney Feinberg called the September 11th VCF an "unbelievable success." He said very few Americans complained about it or argued that it was unnecessary. The program's political allies ranged from Senator Lott to Senator Kennedy. Feinberg said Attorney General John Ashcroft was one of the program's staunchest supporters. Feinberg intoned that only in America would you see a government willing to dispense $2 million per victim after such a disaster.

Kenneth Feinberg concludes that 9/11 was sufficiently unique that it warranted a VCF operated by a master. However, he strongly opposes ever doing such a thing again. He said you can never justify a fund by a type of

disaster. It can only be justified from the perspective of a nation. It cannot be justified at the level of the victim. Heartfelt Solomonic sentiments to be sure, but Special Masters and victim compensation funds, particularly given the corporate case of the BP Deepwater Horizon oil spill trust fund, have not closed the door to government reuse of these policy instruments when the conventional model is judged to fall short in addressing the needs of disaster victims.

Key Terms

Chapter 10 Conclusions and the Future

The Newly Topped Freedom Tower Rises above New York City and is Surrounded by Fully Replaced or Refurbished World Trade Center Buildings. The Tower Represents both the Nation's Resilience and its Defiance of 9/11 Terrorism. The Tower is Designed to be much Stronger, Safer, and Secure than Skyscrapers of the Twin Towers Era.

(Source: Getty Images.)

AS A NATION WE NEED TO KNOW AND APPRECIATE THAT EMERGENCY MANAGEMENT IS AN EVOLVING PROFESSION that is advancing on a great many fronts. Disaster policy and emergency

management interweave. The domain of U.S. disaster policy rests on laws, regulations, rules, public-private contracts, intergovernmental relations, insurance, civil-military relations, science and technology, altruistic organizations, and countless volunteers. People do not have to become emergency managers or emergency responders in order to understand the policy and politics of disaster, but they would be wise to have an open-minded grasp of what emergency management entails.

There is great need for full-time professional emergency managers in government who are able to direct an emergency management program, able in times of crisis to advise the elected or appointed executives they work under or with, and able to lead or cooperate in coordinating the efforts of those working in their own and other organizations. The nation is fortunate to have a great many of these officials. They can be found working at all levels of government, and they often work closely with public executives: governors, mayors, city managers, county executives, and the like.[1]

Disasters are episodic, but at the same time, they are increasingly predictable if not in some respects inevitable. Tolerated vulnerabilities to known natural hazards often allow natural forces to inflict upon people and their property disastrous effects. When this happens it may be better to refer to them as "unnatural" disasters. In 2010, the United Nations and the World Bank published a book titled *Natural Hazards and Unnatural Disasters,*[2] a work that implored senior officials of all governments to advance disaster mitigation and limit vulnerabilities to natural hazards.

There are some "special issues" and "big questions" emanating from subjects examined in this study. Let's take some time to briefly review them. They are added here because they are issues and questions that must be addressed in the years ahead. Moreover, they stand as worthy topics of future research of disaster policy and emergency management.

Special Issues

The Federal Emergency Management Agency and Leadership Changes

Because the Federal Emergency Management Agency (FEMA) has always been a president-serving entity, it should come as no surprise that a change of presidential administration usually triggers wholesale replacement of FEMA appointed leadership. The transition from Bill Clinton to George W. Bush involved replacing FEMA appointees, just as the transition from George W. Bush to Barack Obama did. This can safely be predicted to occur again whenever a new president assumes office. New politically appointed executives affect the management and performance of the agencies and offices they direct. Obama's Craig Fugate, a highly experienced emergency manager, has been FEMA administrator since 2009, and at this writing he continues to serve. This is also the case on the state and local level when turnovers of governors, mayors, city managers, and county executives occur. High turnover of politically appointed disaster officials has sometimes hurt their agency's employee morale, undercut agency performance, and created operational instability. Clinton's, and today Obama's, FEMA has had a generally favorable public image not only because both appointed an experienced and capable emergency manager to head the disaster agency and in Clinton's case because his director (James Lee Witt) was able to serve almost eight full years, the longest tenure of any FEMA director. A few months after his dismal Hurricane Katrina experience, President George W. Bush appointed a capable and experienced FEMA administrator, R. David Paulison, who also helped improve the agency's public image.[3] However, as Miskel contends, the successful operation of the national emergency management system in time of major disaster or catastrophe is often far more important than who holds leadership positions in FEMA.[4]

The congressional reform of FEMA spearheaded in 2006 and 2007 now requires that all future FEMA directors have disaster management experience. Since March 31, 2007, the U.S. Department of Homeland Security (DHS)-FEMA leader has been referred to as the "administrator." However, it is fair to say that the administrator of FEMA from April 1, 2007, onward has most, although not all, of the authority previously vested in the FEMA directors of April 1979 to March 2003 when FEMA was an independent agency.

Regardless of their experience, expertise, or management brilliance, few FEMA administrators can be expected to retain their posts after a catastrophic disaster. The demands of the job in those circumstances are too great, the expectations of the public and elected representatives are too unrealistic, and a fired FEMA head is a convenient scapegoat for any president seeking political survival after a catastrophe. Regardless, history has shown that it is much better for presidents to appoint as FEMA heads experienced emergency managers and with an ascending career in the profession, than it is to appoint inexperienced people chosen for their political or campaign work on behalf of the president.

Do Americans Expect Too Much?

Early in 2001, President George W. Bush's FEMA director, Joseph Allbaugh, testified before Congress that federal disaster assistance was "an oversized entitlement program and a disincentive to effective state and local risk management."[5] An overstatement to be sure, but many Americans expect the federal government to be the insurer of last resort for the disaster misfortunes they experience. This expectation is justifiable in periods of war and economic depression. The expectation is subject to challenge when Americans fail to buy available insurance to help protect themselves against known risks to their life and property, particularly when they were aware of the risks and had the means to purchase the insurance.

For example, the National Flood Insurance Program (NFIP), discussed at length earlier in this book, has many worthwhile features that serve to help those whose homes and businesses experience flood damage. Yet, too few Americans have purchased National Flood Insurance policies. And although many local governments across the United States participate in the NFIP, many of those governments have not gone far enough to discourage development in their floodplains and have not done enough to relocate structures from floodplains.

Homeowner's insurance policies in many U.S. coastal areas are becoming prohibitively expensive. Many homeowners have not adequately insured their homes against the hazards they reasonably face. Residential earthquake insurance in documented seismically active zones is often woefully inadequate. Wind, fire, property, casualty, business continuity, accident, and workman's compensation insurance coverage is often insufficient in many states and locales. Insufficiency is often two pronged. Private insurers choose not to market high-risk policies for disaster coverage, fearing that when the worst transpires claims will be too many, come too often, and are likely to be filed all at once. Correspondingly, those who need to buy the insurance often elect not to purchase policies owing to high premiums, high deductibles, difficulty in collecting on claims, low confidence in the viability of the insurer, or for other reasons. Insurance is an important tool of both disaster preparedness and disaster mitigation, but it is often a tool only selectively used.

Public and private insurance is assuming a much larger role in people's relationships with disasters and emergencies. Creative applications of insurance instruments and in-force policies, both in the United States and in other nations, help unburden governments at all levels from absorbing both great risk and great disaster costs. Americans may expect too much help when disaster strikes, yet they are gaining more awareness of the risks and vulnerabilities they face. Government regulation of private insurers in the United States remains an unevenly handled state level responsibility. Yet oddly it is the federal government and the national taxpayer who are expected to fill the breach when insurance and charity cannot shoulder post-disaster demands.

Winners and Losers in Disaster Policy

Hurricane Katrina reminded Americans that disasters often have profound effects on people who are poor or who are struggling to make ends meet. Disaster relief, especially long-term recovery relief to assist in the rebuilding, relocation, and economic recovery is also a matter of antipoverty social policy for the nation. As Jim Wallis once said, "Sometimes it takes a natural disaster to reveal a social disaster."[6]

Many sociological studies have analyzed and described the problems of poverty, ethnic and racial discrimination, ageism, gender bias, and gay and lesbian discrimination associated with all phases of disaster. In the United States, disaster policy is "conservative" in the sense that the aim of disaster relief is to return damaged areas, and disaster victims themselves, to the condition they were in before the disaster, albeit with some provision for mitigation against the possible repeat of the same type of disaster in the future.

Nonetheless, many millions of Americans—many of whom consider themselves middle class—live only a few lost paychecks away from falling into personal bankruptcy or poverty; disasters often push many disaster victims over an economic brink they are hard-pressed to climb back to.

The winners in a disaster are those people able to find post-disaster help from the government and from other sources such that they and their families recover from the adversities they have suffered. The losers are those people who are unable to fend for themselves, whose post-disaster needs remain unmet, who cannot draw help from a family or community safety net, or who find that the debt they carried before the disaster prohibits them from qualifying for loans and other forms of financial help after a disaster.

Victims of disaster usually expect and often demand full replacement of their damaged private property. Chapter 9 explored the thorny and controversial issue of disaster victim compensation. What happens when victims do not receive all they think they deserve? People sometimes die in disasters. Why should families of those who perished on 9/11 get so much government and charitable help when families who lost loved ones in other disasters, including other terror disasters, rarely receive as much government and charitable assistance as 9/11 Victim Compensation Fund (VCF) beneficiaries? Clearly, the horror and uniqueness of the 9/11 attack and the loss of nearly 3,000 people may account for the distinction Congress chose to make between that disaster and all others before or since.

Receiving more or receiving less after a disaster embodies other issues. Individual preparedness and "individual responsibility" are two mantras of emergency management. How is someone to gauge his or her vulnerability? Do individuals consciously engage in disaster risk-taking behavior or is this a myth propounded by critics of government disaster relief? Who is responsible for natural hazard risk assessment, and what is done about its results? Are people who work or live in high-rise buildings engaging in behavior that puts them at high risk of terrorism? Are people who live or work in or near national monuments or other symbols of U.S. power engaging in high-risk behavior?

In times of disaster, it is only natural for the victims of those events to ask for and expect help. That help often comes in many forms. Federal, state, and local law and policy is to provide assistance and relief for some, but not all, types of individual and family losses. Government disaster managers tend to talk in terms of meeting the after-disaster needs of victims. State and local governments, with substantial federal subsidization, will repair, replace, and restore disaster-damaged infrastructure, even that owned and operated by privately owned utilities. However, U.S. disaster law and policy is neither designed nor intended to make disaster victims "whole" after a disaster. Those working for charitable organizations recognize this, and so they often seek to fill gaps or unmet needs of disaster survivors through their own aid programs.

Moreover, American social and political cultural norms maintain that people need to make provision for possible disaster losses by purchasing insurance as a hedge. Overly generous government disaster relief would undercut the private market as well as the market for National Flood Insurance. In addition, the American political culture manifests an aversion to government-promoted "moral hazard" behavior. Moral hazard applies when overly

generous government disaster relief provided to victims actually encourages them to engage in hazard risk-taking behavior (e.g., building homes on cliff sides vulnerable to failure during earthquakes, heavy rains, or floods; constructing homes and other structures in coastal high-hazard "V zones" subject to hurricanes and storm surges; erecting shopping malls and other businesses in known floodplains).

Nevertheless, the government made an effort to avoid encouragement of moral hazard behavior risks producing social inequities and social injustices. Policymakers are forced to revisit this issue after many disasters, as was the case when the September 11th VCF was established. A long-standing issue likely to reemerge in the future is the wisdom of creating a national "all-hazards" insurance program through which Americans could reasonably insure themselves against the full range of disaster hazards they face. Private insurers and reinsurance firms would have to be satisfied that government was not "nationalizing" their casualty and property insurance lines, state government insurance regulation might have to be preempted by the federal government, and the government would have to deny government disaster relief to those who could have purchased all-hazards insurance and did not.[7]

In the United States, just as in most nations, disaster policy is a product of law, program management, and political decision making. For America, disaster policy is distributive politics in the sense that costs of disaster recovery are shouldered nationally (with significant payouts by state and local governments experiencing the disaster), whereas benefits (aid dispensed) are concentrated at the substate and local levels.

U.S. disaster policy is modestly redistributive in that taxpayers living in areas with few presidentially declared disasters tend to subsidize taxpayers living in areas with relatively many presidentially declared disasters.

Some disasters actually transfer resources from low-income taxpayers to high-income taxpayers. Disaster federal and state relief to high- and middle-income victims suffering loss of their coastal homes and properties, or loss of their properties in other high-hazard zones (floodplains, mountainsides, wildland areas vulnerable to fire, and the like) often eclipses relief payouts to low-income disaster victims. Wealthy people obviously stand to lose more because they have more to lose. But also, wealthy people often freely choose to take greater risks in where they buy property and build, and they often purchase insurance to cushion any losses they may sustain from anticipated disaster forces. Certain losses sustained by the wealthy, and which were not covered by their insurance policies, may be eligible for federal disaster assistance if their property is located in a county included in a presidential declaration of major disaster. However, many categories of the FEMA Individuals and Households Program (IHP) require applicants to qualify through means-testing rules. Those whose incomes or total assets exceed a certain inflation controlled annual thresh-old are not allowed to receive FEMA grant assistance, and those people are steered to the U.S. Small Business Administration (SBA) or other agencies to apply for disaster loans.

Disasters, Government, and Business

Does government bail out businesses after disasters? The answer is a qualified yes. For example, Congress passed and President George W. Bush signed into law the Terrorism Risk Insurance Act (TRIA) in November 2002 to stimulate business investment that had slowed to a trickle after the events of 9/11 (see the "How Things Work" box).

Even the September 11th VCF was a partial effort to shield commercial airlines whose planes were lost on 9/11 from lawsuits expected to be filed by families of people killed as a result of the 9/11 attacks. The Gulf Coast Recovery Authority, established to help bring back the infrastructure and economies of Katrina-devastated areas of the South, represents another example of support to public and private endeavors.

Businesses tend to draw the most government recovery help from the SBA loans, U.S. Department of Agriculture (USDA) disaster insurance programs, and from a host of federal insurance, finance, and banking agencies. However, the federal government is most likely to aid sectors of the national economy, or regional economies, hurt by a disaster rather than only a few specific corporations that sustain disaster loss. Also, federal and state government is sensitive to the needs of people who have lost their jobs owing to a disaster. The Disaster Unemployment Assistance Program (DUA), provided through FEMA, has helped those whose jobs may have been temporarily lost owing to a declared disaster event. DUA helps employers retain their local labor force until their enterprise is returned to normal operation. Government efforts to promote business recovery are also efforts aimed at helping people regain employment.

As indicated, for many disaster victims the federal government is a kind of insurer of last resort. The federal government often makes available to disaster victims low-interest loans of various types. In cases of presidentially declared major disasters, victims in the counties covered may receive various types of grants and in-kind assistance. Similarly, state and local governments, as well as private businesses and nonprofit organizations, may be eligible to receive various types of federal help—not all of which is from SBA or FEMA.

The Big Questions

What role does private insurance play in disaster mitigation and disaster recovery? What is the relationship between private insurers and the government? Where does National Flood Insurance fit in the scheme of disaster management? Can the government compel people to buy insurance against disaster? If not, should the government deny help, especially monetary help, to those who could have bought insurance before a disaster but chose not to?

How Things Work: Terrorism Risk Insurance Act

TRIA created a three-year federal program, which in 2005 was extended by law to December 31, 2007. The Terrorism Risk Insurance Program Reauthorization Act of 2007, signed by the president on December 26, 2007, extends TRIA through December 31, 2014. TRIA backs up insurance companies and guarantees that certain terrorism-related claims will be paid. Under the terms of the act, the federal government has agreed to backstop private insurers who fear they will be swamped and bankrupted by claims filed by those who suffer the consequences of a future large-scale terror attack in the United States.

TRIA requires the secretary of the Treasury, in concurrence with the secretary of state and the attorney general of the United States, to determine whether an event should be certified as an act of terrorism. They are to use preestablished criteria in making this judgment. For example, "an individual or individuals acting on behalf of any foreign person or foreign interest" must commit the act. Under TRIA, insurers can now claim government reimbursement for losses in events so certified. The law provides for "a transparent system of shared public and private compensation for insured losses resulting from acts of terrorism."[8]

In the case of 9/11, the federal government through TRIA and other measures helped reinforce the insurance industry, and this bolstered confidence in capital markets, making possible bank loans for major new private construction projects that had been stymied by matters of terrorism risk.

TRIA was necessary: a Real Estate Roundtable survey one year after 9/11 found that projects worth $15.5 billion in seventeen states were stalled or canceled for lack of terrorism insurance, and Moody's downgraded $4.5 billion in commercial mortgage-backed securities for the same reason. According to Rep. Steve Israel, "We can't recover from an attack if the market is paralyzed." Unfortunately, events like the Boston Marathon bombing demonstrate the continued need for TRIA. According to the congressman, "We must extend it before the market is disrupted. Otherwise, insurers could stop writing policies that cover attacks, banks might not finance projects, and companies would be unable to insure their property or employees."[9]

The renewal of TRIA should maintain safeguards so that the federal government is not relied on too heavily. The Treasury secretary, secretary of state, and attorney general must jointly certify an act of terror, and the losses must exceed $5 billion for that single act. And the federal government will provide assistance only if the entire insurance industry's aggregate insured losses from an attack exceed $100 billion. The Treasury would be able to recoup losses by applying a surcharge to future insurance premiums.[10]

TRIA is not primarily about helping insurance companies—it's about making sure our economy is not dragged down by the threat of terrorism. 9/11 fundamentally altered the commercial real estate market in New York, and losing this law would have a further disastrous effect.[11]

Has U.S. disaster policy become a modern and growing public works subsidy program for state and local governments? How is infrastructure defined and who pays for its repair or replacement after disaster? Are government buyouts and relocations replacing engineered disaster mitigation (flood levies or flood control works)? Should the federal government pay for or subsidize what is built on the site of ground zero? How much government responsibility attaches to the failure of levees in and around New Orleans during and after Hurricane Katrina? How can the nation prepare for, respond to, and recover from disaster forces made worse by the effects of global climate change? How has the marriage of homeland security and emergency management worked out? Have the partners adjusted to one another over the last decade or more, and will the marriage last when tested?

These are all worthy questions, which deserve analysis and answers from policymakers and the public.

Volunteers in Disasters

When do volunteers and volunteer organizations make important contributions to disaster relief and recovery, and when do they complicate or impede emergency response and recovery? These are questions likely to come up again in the near future. Volunteers, especially through nonprofit organizations active in disasters, are hugely important in disasters. They are often the first on the scene, they frequently aid responders, they are there in varying degrees to help victims during the response and recovery, and their accounts of events are often presented by news organizations. The rise of social media has made it immensely easy for emergency managers and others to mobilize small armies of young volunteers on very short notice. The national proliferation of government-sponsored or - encouraged volunteer organizations dedicated to educating and training unpaid volunteers for disaster management work is hugely beneficial to the advancement of emergency management and to the political support of improved disaster policy. This author observed a television broadcast not long ago in which former President Clinton told an audience that his daughter Chelsea had mobilized 2,000 volunteers using social media within a few days to help in the New York area Superstorm Sandy response. Volunteers, particularly through formal organizations, are a political force to be reckoned with in disaster policy and politics.

The Rise of Resilience

The concept of resilience has found many advocates in the emergency management community. Disaster resilience is at the heart of the National Disaster Recovery Framework (NDRF). Resilience has many meanings, but it is well suited to the sociotechnical world of emergency management. *Designing Resilience for Communities at Risk: Sociotechnical Approaches* is an excellent and far-ranging treatment of the subject.[12]

The National Academies published *Disaster Resilience: A National Imperative*, which aims to promote the values of resilience at the individual, household, community, and national levels.[13] The report seeks to develop a scorecard and set of metrics by which disaster resilience may be measured over time. More of the world of emergency management will most definitely include greater efforts to advance disaster resilience. With the increasing frequency of natural and human-induced disasters and the increasing magnitude of their consequences, a clear need exists for governments and communities to become more resilient. The report also addressed the importance of resilience, the challenges in advancing it, and approaches for building resilience in addition to outlining steps for implementing resilience efforts in communities and within government.

Gap Questions

Where are the gaps in American disaster policy? Can federal disaster mitigation succeed in the absence of federal zoning? If there are few major federal inducements to press states and localities to engage in land-use planning and regulation sensitive to disaster vulnerability, how can national disaster mitigation progress?

Is there proof that disaster mitigation consistently works and saves money? How will the new Freedom Tower and other structures built on New York's ground zero be less vulnerable to terrorism than the original World Trade Center complex? How will cities and towns of America's heartland better prepare their people for the threat of severe storms and tornadoes? How can America's old and new nuclear power plants be better protected from the forces that destroyed or disabled the Tokyo Electric Power Company (TEPCO) Fukushima Daichii reactor complex in Japan in March 2011? How well is the United States preparing for the challenges and aggravated hazards of climate change? These are only a few of many "gap" questions in the field.

Answers to these questions will come through scholarly analysis, the contributions of emergency management professionals, and political interchange. If these gaps are to be filled in the future, the political system must do the job. As Peter May has maintained, policymakers, including the president, tend to do a much better job resolving these issues if they act between major disasters, not immediately after them.[14]

The Federal Emergency Management Agency and the U.S. Department of Homeland Security: In or Out?

An old question used to be whether FEMA should remain in the DHS or be returned to the independent agency status it enjoyed from 1979 to 2003. FEMA incorporation into DHS has had dramatic effects. The FEMA director, now titled administrator, from 2003 through 2006 had no direct access to the president. Instead he had to go through an extra layer of DHS bureaucracy, and only then with the cooperation of the DHS secretary, to get what was needed. Some claim that even one extra layer has proved one too many in the critical moments."[15] Under the post–Hurricane Katrina Act of 2006, the FEMA administrator again has access to the president in times of disaster. However, the secretary of DHS also has direct access to the president as well. In formal terms, the DHS secretary is the FEMA administrator's supervisor.

Congress debated the FEMA "in or out" issue after Hurricane Katrina and elected to keep FEMA inside DHS. Both the George W. Bush and Obama administrations have supported, if not championed, this decision since 2006 and 2009 respectively. FEMA has been within DHS since 2003, so now there are considerable "sunk costs" that bind FEMA to DHS. The National Response Framework (NRF) has interlaced homeland security with emergency management. Taking FEMA out of DHS might fracture administration of the NRF. DHS houses a massive set of expensive homeland security grant programs, and FEMA manages in various ways parts of these programs. Most of this program funding is directed to terrorism, but dual-use components of these programs significantly benefit (as well as distort) state and local emergency management. Over the past ten years FEMA has established linkages with other DHS offices. What will happen to these relationships if FEMA is moved out of DHS? At this writing, such a move seems highly unlikely.

An even more speculative question might be what is the future of the DHS? Will Congress or the president eventually pull DHS apart? Will DHS shrink? How will FEMA within DHS be affected by the downsizing of the department and the end of the U.S. war on terrorism? Only time will tell.

The Future

It is no surprise that many scholars today conclude that the definition of disaster is socially constructed.[16] It is also fair to say that the definition of disaster is "politically constructed" by news the media portrayals of an event, how the president chooses to define and comprehend the event, and how people among the general public perceive and judge the event.[17]

In another sense, the political definition of disaster flows from law; judgments of previous presidents; a sitting president's previous actions modulated by the political circumstances of the time when his or her judgments had to be made; the strategic behavior of governors seeking federal assistance; and the pressure imposed by elected representatives at the federal, state, and local level. Understanding disaster policy and politics is worthwhile, although it demands work, focus, and objectivity. Disaster policy and emergency management have made and will continue to make a difference both inside and outside the United States.

Know your enemy and know yourself and you can fight a hundred battles without disaster.

—Sun Tzu[18]

Key Terms

Appendix A

Alphabetical List of Nations Pledging or Offering Aid to the United States after Hurricane Katrina in 2005

Countries (A to Z)	Description
Afghanistan	Has pledged USD 100,000 to the hurricane victims.
Albania	Has pledged USD 300,000.
Argentina	Has made offers of help and assistance.
Armenia	Has pledged USD 200,000 and made offers of help and assistance.
Australia	AUD 10 million and a team of 20 emergency response officers immediately. Australia is donating 8 million to American Red Cross.
Austria	140 specialists of the AFDRU are still on stand-by. Their focus would be on providing clean water with portable water-treatment plants. Within the EU Emergency Assistance for Katrina, Austria will set up a communication network using IT and communication equipment for assistance/support, provide 10 sets petrol driven dirty water pumps, 500 pieces tarps/plastic sheeting and 300 camp beds.
Azerbaijan	Has made offers of help and assistance, including tarps, camp beds.
Bahamas, The	Has pledged USD 50,000.
Bahrain	Has made offers of help and assistance.
Bangladesh	Will donate humanitarian aid worth USD 1 million and said it would send 160 disaster management experts, including doctors, nurses, engineers and others.
Belarus	Has made offers of help and assistance.
Belgium	Has offered 3 medical teams of 31 personnel, logistic team of 10 personnel, coordination team of 4 personnel, civil engineering team of 10 personnel, diving team, and also balloon-lamps, low and high capacity pumps and small generators.
Bosnia and Herzegovina	Has made offers of help and assistance.
Cambodia	The king donated USD 20,000 to match the USD 20,000 Cambodian government donation.
Canada	September 5, 35 military divers were poised to depart by air Sunday from Halifax and Esquimalt, B.C., for the New Orleans area. September 4, on the request from U.S. Department of Health and Human Services, Canada sent thousands of beds, blankets, surgical gloves and dressings and other medical supplies. On September 2,
Canada	the Government of Canada announced it was sending three warships along with a Coast Guard vessel, and three Sea King helicopters to the area. Over 1,000 personnel are involved in the operation, including engineers and navy divers. The Canadian Heavy Urban Search and Rescue out of Vancouver has been in Louisiana since September 1, due to security they started their mission on Sept 3. Ontario Hydro, Hydro-Québec, and Manitoba Hydro, along with other electrical utilities, have crews set to go to the affected areas. On September 2, Air Canada participated along with U.S. member airlines of the Air Transport Association, in a voluntary airline industry initiative to support rescue and relief operations.
Chile	Has made offers of help and assistance.
	On September 2 the Ministry of Foreign Affairs said that it will offer USD 5 million along

China	with emergency supplies, including 1,000 tents, 600 generators, bed sheets, immediately for disaster relief. China will also send medical care and rescue workers if they are needed. This aid package consisting of 104 tons of supplies later arrived in Little Rock, Arkansas. A chartered plane carrying the supplies has arrived on September 7.
Colombia	Has made offers of help and assistance.
Cuba	Offering to send 1,586 doctors and 26 tons of medicine. The doctors await permission to enter the US.
Cyprus	Has offered USD 50,000.
Czech Republic	Has offered rescue teams, field hospital and pumps and water processing equipment.
Denmark	Has offered water purification units.
Djibouti	Has offered USD 50,000.
Dominica	Has offered police to monitor hard-hit areas.
Dominican Republic	Has offered rescue workers, doctors, and nurses.
Ecuador	Has made offers of help and assistance.
Egypt	Has sent 2 C-130 planes loaded with blankets, medical equipment, and canned food.
El Salvador	Offered to send troops to help keep order in New Orleans.
Equatorial Guinea	Has pledged USD 500,000.
Finland	Has sent Finn Rescue Force—the group consists of 30 firemen and three Red Cross logistics experts. Additionally Finland has offered 300 tents, a water purification unit, sterile gloves, bed sheets, pillow covers, tarps and first aid kits.
France	Concrete help was refused by the USA at first, but on 2 September, Condoleezza Rice said that the US authorities would assess the situation and contact French authorities accordingly. On September 4, US authorities formally requested French assistance. France offered disaster relief stocks prepositioned in Martinique (600 tents, around 1000 beds, 60 electrogenic groups, 3 pumps, 3 water purification
France	stations, 1000 folding jerricanes and other material). A 35-person team of the Sécurité civile (Civil defence) from Guadeloupe and Martinique is ready, and a 60-man "catastrophe intervention" aeromobile detachment could be ferried from mainland in a short time. The Ministry of Defence offers 2 planes already in the zone and 6 more from mainland France, and two ships of the French Navy (probably the BATRAL Francis Garnier or Champlain, and the frigate Ventôse) and a 20-person team of emergency medical specialists. The non-governmental organisation Télécoms sans frontières and the company Véolia environnement have offered aid in communications and water management, respectively. On September 7, the Ministry for Foreign Affairs stated that an Airbus Beluga from Toulouse with 12.7 tonnes of supplies is flying to Mobile, after a brief stop in the UK to load more food. 2 Casa airplanes from Martinique have landed in Little Rock, ferrying tents, covers and 1000 rations of food for 24 hours.
Gabon	Has pledged USD 500,000.
Georgia	Has made offers of help and assistance.
	Two German Army Airbus planes landed in Florida with about 25 tonnes of food rations to be transported to the disaster area. Further planes were prepared. Germany offered airlifting, vaccination, water purification, medical supplies including German air force hospital planes, emergency electrical power and pumping services. The aid is ready to go on German air force and chartered planes. A team of specialists from THW (German

Germany	federal agency for technical relief) is planning technical measures and logistics in close contact with local authorities. A team of 89 flood fighting specialists and 5 medical personnel has been dispatched from Ramstein Airbase to Louisiana by the American Air Force. They will bring 15 high performance pumps (10 pumps with a capacity of 15,000 litres per minute and 5 pumps with a capacity of 5,000 litres per minute) and 28 vehicles. On Saturday, September 10, 4:30 pm, the THW started the first 15,000 litres pump at pumping-station No. 19. Three other 15,000 litres pumps will follow. The pumping out of New Orleans would have taken much more time if these pumps and the THW specialists had not been provided. The Minister-President of the federal state of Rheinland-Pfalz has addressed a letter to the commanders of the American forces stationed in his state offering financial support to those affected by the flooding. Another German Air Force cargo plane carrying several thousand military rations (MRE) was denied entry into US airspace since, according to US authorities, they were not certified BSE-free. This was disputed by German authorities, pointing out that they were BSE-free according to NATO rules, that US soldiers would eat them regularly during joint operations (e.g. Afghanistan) and that these meals fully complied to UN rules.
Greece	Two cruise ships to house those left homeless, a rescue team, and supplies.
Guatemala	Has made offers of help and assistance.
Guyana	Has made offers of help and assistance and is organizing a telethon to raise money for victims.
Honduras	Has offered 135 flooding and sanitation experts.
Hungary	Has pledged USD 5,000 and offered to send a Special Search and Rescue Team, and also five doctors.
Iceland	Has offered USD 500,000.
India	India has offered to contribute USD 5 million to the United States Red Cross for relief and rehabilitation of the victims. They have also offered to donate medicines and large water purification systems for use in households and small communities in the stricken areas, where potable water is a key concern. India has sent tarps, blankets, and hygiene kits.
Indonesia	Has offered to send 45 doctors and 155 other medical staffers and 10,000 blankets to help survivors.
Iran	Has offered to send humanitarian aid and 20 million barrels of crude oil.
Iraq	Has pledged USD 1 million to the Red Cross via the Red Crescent.
Ireland	Has offered to send 30 members of the Irish Defence Forces. The Irish army would supply thousands of ready meals, tentage, blankets, water purification services, and medical aid, including first aid kits, crutches and wheelchairs. The group would include about ten experts in stress debriefing. Six of the troops would operate two water purification plants. The Irish Government also announced it is to provide initial funding of EUR 1.2 million for the victims.
Israel	Has sent a medical team. Israel has offered field hospitals and hundreds of doctors, nurses, technicians and other experts in trauma, natural disasters and public health.
Italy	Italy has offered to send two Hercules C130 cargo jets fitted with emergency aids, including 300 adult camp beds, 300 blankets, 600 sheets, 1 suction pump, 6 lifecrafts, 11.200 chlorine tablets, 5 units of large first aid kits, baby food formula pumps, tents, and power generators. Italy has also offered to send some experts of the Protezione Civile to help coordinating relief efforts in the damaged area.
Jamaica	Has made offers of help and assistance.
	The Japanese Foreign Ministry has said that it would provide USD 200,000 to the American Red Cross to assist victims of Hurricane Katrina. Japan will also identify needs

Japan	in affected regions via the U.S. government and will provide up to USD 300,000 in emergency supplies such as tents, blankets, and power generators if they receive requests from the U.S. for such assistance. One Japanese individual, Takashi Endo, donated USD 1 million from his personal funds to Katrina relief efforts.
Jordan	Has made offers of help and assistance.
Kenya	Has offered USD 100,000. (Reports of "USD 400 million in petroleum products" aid from Kenya are erroneous.)
Korea, South	Has offered USD 30 million and dispatched a rescue team.
Kuwait	Parliament is going to approve USD 500 million for aid in oil and other humanitarian aid.
Latvia	Has offered a disaster relief team.
Lithuania	Has made offers of help and assistance.
Luxembourg	Team of five persons, 1000 camp beds, and 2000 blankets.
Malaysia	Has pledged USD 1 million to American Red Cross.
Maldives	Is sending USD 25,000 to American Red Cross.
Malta	Has made offers of help and assistance.
Mauritania	Has promised USD 200,000 to American Red Cross.
Mexico	Kelly Air Force Base in San Antonio, Texas received almost 196 Mexican troops, 14 truckloads of water, a mobile surgical unit, 45 military vehicles, 3 tons of purified water, and more than 250 tons of food, bottled water, canned food, disposable diapers, and medical supplies. The Mexican Government has sent USD 1 million through the Mexican Red Cross which collected an additional million, as well as 200 tons of food delivered in five airplanes from the Mexican Air Force by another Mexican Government body. The Mexican Navy has sent two ships, 385 troopers, eight all-terrain vehicles, seven amphibious vehicles, two tankers, two helicopters, radio communication equipment, medical personnel and 296 tons of food as well. The state of Jalisco also sent four experts in disaster, while the Federal government offered to send expert teams in epidemiology and to cover the costs of returning any Mexican national back to Mexico.
Mongolia	Has pledged USD 50,000.
Nepal	Has pledged USD 25,000.
Netherlands	Royal Netherlands Navy Frigate Hr. Ms. Van Amstel has arrived from the Netherlands Antilles. The frigate is filled with supplies and has helicopters on board that can be used in rescue actions. Further, The Netherlands have sent experts on the subject of water containment and dikes, identification teams and pumps to deliver clean drinking water, F-16s, and divers from the Royal Netherlands Marine Corps.
New Zealand	Has pledged USD 2 million though the Red Cross. This contribution is in addition to the offers the government has already made to send an Urban Search and Rescue Team, a Disaster Victim Identification team or post disaster recovery personnel.
Nicaragua	Has made offers of help and assistance.
Nigeria	Has pledged USD 1 million to hurricane disaster relief.
Norway	Has made offers of help and assistance. An amount of NOK 10 million will be given through the Norwegian Red Cross and the UN. In addition, Norway has offered divers and medicines.
Oman	Has pledged USD 15 million.
Pakistan	On September 4 Pakistan offered to send a team of doctors and paramedics to support the relief agencies. Pakistan has also pledged USD 1 million through the Red Cross.

Palau	Has pledged USD 50,000.
Papua New Guinea	Has promised USD 10,000 to American Red Cross.
Paraguay	Has made offers of help and assistance.
Peru	Has offered to send 80-100 doctors to help survivors.
Philippines	Has offered to send a 25-member team of aid workers. The Philippines Red Cross is donating USD 25,000.
Poland	Has made offers of help and assistance.
Portugal	Has offered tents, mattresses, blankets, hygiene kits. Portugal is lending 2 percent of its strategic oil reserve, equivalent to 500,000 barrels of oil.
Qatar	Has pledged USD 100 million to the victims.
Romania	Has offered 2 teams of medical experts.
Russia	One of the first countries to offer assistance. Up to four jets were placed on standby at the airport Ramenskoe near Moscow as early as August 30, including heavy Ilyushin Il-76-TDs with special evacuation equipment, medical equipment, a water-cleansing system, a rescue helicopter BK-117 and two special cars; and a passenger IL-62, which would bring 10 coordinators and 50 rescuers, as well as 6 tons of drinking water. On September 6 the Bush administration gave its approval. The jets are scheduled to land at Little Rock, Arkansas.
Saudi Arabia	Saudi Refining, a Houston-based subsidiary of state oil firm Saudi Aramco, will donate USD 5 million to the American Red Cross, as well as $250,000 from AGFUND.
Singapore	Three Singaporean CH-47 Chinook helicopters and thirty-eight RSAF personnel from a training detachment based in Grand Prairie, Texas have been assisting in relief operations since 1 September. They had so far ferried about 700 evacuees and hauled tons of supplies in 39 sorties on 4 September. One more CH-47 Chinook helicopter is on the way to aid in relief efforts.
Slovakia	Has promised blankets, beds, first aid kits.
Slovenia	Has made offers of help and assistance.
Spain	Has sent 2.1 million barrels of crude oil from its strategic reserves (the 1.75% of the Spanish reserves) for a 30 day period. On September 7 two Hercules cargo jets took off with 15 tonnes of food rations, electrical generators and batteries, medical equipment, and other humanitarian assistance collected by the Agencia Española de Cooperación Internacional (AECI). A second envoy is expected to be sent in the next few days.
Sri Lanka	USD 25,000 for the victims of the hurricane.
Sweden	Offered to send medical and technical aid, and has been on standby since September 2 to send a Hercules cargo jet filled with three complete GSM systems, first aid kits, blankets, ready-to-eat meals, generators, 2 heavy water purification plants, as well as water sanitation experts. On September 4 the U.S. State Department declined the aid, saying it was currently unable to accept foreign aid packages. The Swedish Rescue Services Agency has stated that they have the aircraft ready for immediate deployment upon receiving a green light from the Bush Administration. On September 12 the Hercules plane left the Gothenburg-Landvetter Airport, carrying a cargo of three Ericsson GSM network systems. A team of technical consultants to help with the aid package was also provided.
Switzerland	Offered specialised personnel and material to the USA and the World Health Organisation (WHO). In accordance with US requirements, 50 tonnes of rescue equipment are ready to be sent, along with two logisticians of the Direction du développement et de la coopération (DDC, "Swiss Agency for Development and Cooperation") to help coordinate distributions. Four physicians and two water specialists were also put to the disposal of the

	WHO. An answer from the USA was expected for the 6th in the evening.
Taiwan	Has pledged more than USD 3 million to the relief effort, plus supplies.
Thailand	Has sent at least 60 doctors and nurses along with rice.
Tunisia	Has sent two C-130s with relief supplies.
Turkey	Has promised USD 2.5 million in cash and aid.
Uganda	Has offered USD 200,000.
United Arab Emirates	Has pledged USD 100 million.
United Kingdom	Has dispatched 500,000 ration packs worth EUR 3 million, to the region. Has also offered medical experts, Urban Search and Rescue equipment, Marine engineers and high-volume pumps, skilled personnel including engineers who could support recovery efforts for installations and systems, technicians, staff trained in disaster management and emergency response activities. It has also pledged to release an extra 2.2 million barrels of oil.
Venezuela	Has offered to send fuel and food to portions of the United States which some aid may not be able to reach. State-owned Petróleos de Venezuela, the parent company of Citgo Petroleum Corporation, has also pledged a USD 2 million donation for hurricane aid. Two mobile hospital units were also offered but were declined, according to Jesse Jackson in a BBC News 24 interview.
Vietnam	Has pledged USD 100,000.
Yemen	Has promised USD 100,000 through the Red Cross.

Source: NationMaster, "Disaster Statistics > Hurricane Katrina > International aid response (Most Recent) by Country," www.nationmaster.com/graph/dis_hur_kat_int_aid_res-hurricane-katrina-international-aid-response (accessed February 5, 2014).

Appendix B

Pledges from International Organizations to Hurricane Katrina Relief, 2005 and CNN Report on Offers of Aid from Nations to the United States

Below is a list of international governmental organizations and international non-governmental organizations offering aid to the people of the United States.

European Union

Any help and assistance that is requested, also agreed to provide oil reserves to the U.S. The U.S. only accepted first aid kits, blankets, water trucks, and 500,000 ready-to-eat meals.

Habitat for Humanity International

Pledged to help Habitat families and other low-income families in the affected areas recover and rebuild.

International Energy Agency

The Paris-based International Energy Agency agreed to make 60 million barrels (9,500,000 m^3) of product available "to help the United States weather the economic problems caused by Hurricane Katrina. The product, crude oil or gasoline, will go to the marketplace over the next month at the rate of 2 million barrels per day (320,000 m^3/d)."

IFRC (Red Cross and Red Crescent)

Sent more than 80 disaster experts. The International Federation of Red Cross and Red Crescent Societies launched the largest mobilization of resources for a single natural disaster, including the recruitment of 1,900 staff and volunteers. All available resources were moved to safe areas so relief efforts could begin immediately after the storm passed. More than 250 emergency response vehicles (ERVs) and countless other Red Cross resources were sent to provide hot meals, snacks, bottled water and distribute other much-needed relief supplies. The Red Cross opened shelters in support of the massive evacuations in all affected states. As of Monday, 29 August, some 230 Red Cross shelters had been opened in Mississippi, Louisiana and Texas, housing over 40,000 people. In coordination with the Southern Baptists, preparations have been made to provide more than 500,000 hot meals each day.

International Medical Corps

Deployed a rapid response team to affected areas in Louisiana and Mississippi to determine the needs in impacted communities and provided medical, technical, and financial assistance. From September through December, IMC provided volunteer physicians and nurses to run mobile clinics serving displaced communities in Louisiana, serving more than 13,000 patients. An IMC psychosocial support program provided tools and strategies to school-based staff and volunteers to enable them to cope with their own grief and loss and to address the needs of affected students. IMC also provided structured psychosocial activities for children, adolescents, and their families at FEMA-established temporary trailer parks.

NATO

Made offers of help and assistance. As of September 4, NATO provided humanitarian aid, such as food, medical supplies, and wheelchairs. NATO was prepared to send troops, but the U.S. government has not issued a request for personnel.

OPEC

Made offers of help and assistance.

Organization of American States

Donated $25,000 to the American Red Cross.

CNN REPORT

U.S. receives aid offers from around the world Sunday, September 4, 2005

(CNN)—The U.S. government has received offers of aid from dozens of nations across the globe in the aftermath of Hurricane Katrina, the State Department said.

Neither the White House nor the State Department has said whether these offers have been accepted.

However, Reuters reported Sunday that the United States has asked for assistance from the European

Union and NATO.

The EU Executive Commission said the United States has asked for first aid kits, blankets, water trucks and 500,000 prepared meals, Reuters reported.

NATO said the United States had asked it for food supplies, Reuters reported. "NATO stands ready to continue to support the United States as it recovers from this natural disaster," the alliance reportedly said in a statement.

Among those offering assistance are India, Sri Lanka, Thailand and Indonesia, the four countries hardest-hit by the December 26 tsunami.

Other international organizations also offered help, ranging from medical teams to tents to cash donations. They include the Organization of American States, the U.N. High Commissioner for Refugees and World Health Organization.

The United Nations has offered to help coordinate international relief.

Following is a list of some of countries offering aid:

Africa

- Nigeria has pledged $1 million to hurricane disaster relief, government officials told CNN. "Nigeria will be happy to pledge $1 million to the hurricane disaster fund in the spirit of brotherhood," Finance Minister Ngozi Okonjo-Iweala said.

Asia

- China offered $5 million in aid for victims of Hurricane Katrina. If needed, the Chinese government also is prepared to send rescue workers, including medical experts, officials said.
- Japan has offered to provide $200,000 to the American Red Cross, the Japanese Foreign Ministry said. Japan also will provide up to $300,000 in emergency supplies such as tents, blankets, and power generators if it receives requests, the ministry said.
- India is making a $5 million donation to the American Red Cross, Ronen Sen, Indian ambassador to the United States, said Saturday. In addition, Sen said India was willing to donate essential medicines to the relief effort.
- The Singapore armed forces, responding to requests by the Texas Army National Guard, has sent three Chinook helicopters to Fort Polk, Louisiana, to help in relief efforts.
- South Korea awaits a U.S. response after pledging aid, a government official said.
- Afghanistan pledged $100,000 to help provide aid to the hurricane victims, according to a statement issued by the U.S. Embassy in Kabul.
- Sri Lanka will donate $25,000 to the American Red Cross.
- Taiwan has pledged more than $3 million to the relief effort.

Americas

- Canada has offered to help in any way it can, and its navy is preparing a ship full of emergency disaster relief supplies to be sent when a request comes.
- Cuban President Fidel Castro offered to fly 1,100 doctors to Houston, Texas, with 26 tons of medicine to treat disaster victims.
- Mexico has offered $1 million and is sending 15 truckloads of water, food, and medical supplies via Texas. The Mexican navy has offered to send two ships, two helicopters and 15 amphibious vehicles.
- Venezuelan President Hugo Chavez, a vocal critic of the United States, offered to send cheap fuel, humanitarian aid and relief workers to the disaster area.

Australia

- Australia is giving $10 million, most of it to the American Red Cross, according to the Australian Foreign Minister Alexander Downer.

Europe

- France has offered mobile help from rescue teams in the French Antilles in the Caribbean, including a civil defense detachment of 35 people, tents, camp beds, generators, motor pumps, water treatment units and emergency kits, two CASA cargo aircraft, a ship (BATRAL *Francis Garnier*) and the frigate Ventose with its Panther helicopter, and a hurricane disaster unit. France also has offered assistance from the French mainland, including several aircraft. In addition, the NGO Telecoms Sans Frontieres, which specializes in restoring phone lines and Internet service in disasters, is ready to send a team of experts and equipment. Veolia Environment, which has facilities in Louisiana, has offered to make its local water management resources available.
- Germany has offered a range of assistance, including medical and transportation services, water treatment capabilities and aid in searching for victims and supplies. Germany also has said it is ready and willing to "dip into its own emergency oil reserves" to release some 2 million barrels a day for 30 days.
- Italy has offered to send aid and evacuation specialists immediately, Italy's civil protection unit said. Authorities have prepared two military transport planes to fly amphibious vessels, pumps, generators, tents and personnel to New Orleans, Louisiana, and other areas. They were awaiting word from U.S. officials, the unit said.
- The Netherlands will provide teams for inspecting dikes and for identifying victims if there is a formal request from the United States. It also will send a frigate from Curacao in the Netherlands Antilles to New Orleans shortly to provide emergency assistance, the Dutch government said.
- Russia has offered to help with rescue efforts but is awaiting a reply from Washington.
- Spain expects to receive a formal request to release gasoline stocks to the United States and is prepared to grant it, an Industry Ministry spokesman said.
- Sweden's Rescue Authority said it was on standby to supply water purifying equipment, health care supplies and emergency shelters if needed.
- British Prime Minister Tony Blair has said his country stands ready to help the United States in whatever way it can.

Middle East

- Qatar has offered the United States $100 million to assist in the humanitarian crisis triggered by Hurricane Katrina.
- Saudi Refining, a Houston-based subsidiary of state oil firm Saudi Aramco, will donate $5 million to the American Red Cross to support relief efforts for hurricane victims.
- Iran has offered to send humanitarian aid to hurricane victims, Reuters reported. "We are prepared to send our contributions to the people through the Red Crescent," Foreign Ministry spokesman Hamid Reza Asefi told Reuters.

Source: CNN, "U.S. Receives Aid Offers from Around the World," September 4, 2005, http://edition.cnn.com/2005/US/09/04/katrina.world.aid (accessed February 6, 2014).

Glossary

Abstract reasoning
: Helps produce testable knowledge and propositions that are generalizable and applicable in many contexts. Helpful in mathematical computation, in logic, and in making comparisons and identifying various associations among different types or sets of data and information.

All-hazards emergency management
: Assumes common sets of emergency preparedness and response procedures and practices are applicable in any locality and that an economy of scale is achieved by planning and preparing for disaster in generic terms rather than for each unique type.

Analytical approaches
: Approaches and models thatallow for experimentation, trial, and error. They were the early basis of public policy analysis.

Antipoverty social policy
: Disasters often push many disaster victims over an economic brink they may not be able to climb back to. Disaster often highlights the existing problems of poverty, ethnic and racial discrimination, ageism, antifeminism, disability, and gay and lesbian discrimination. Social policies, laws, and programs sometimes may not be enough to protect people in marginalized groups from increased discrimination in times of disaster. In the United States, disaster policy tends to be "conservative" in the sense that the aim of disaster relief is only to return damaged areas, and disaster victims themselves, to the condition they were in before the disaster, albeit with some provision for mitigation against the possible repeat of the same type of disaster in the future.

Applied heuristics approach
: Based on heuristics, verbal explanatory sketches, or conceptual frameworks that help public managers produce adequate explanations for puzzling things. Heuristics embody propositions subject to confirmation or disconfirmation; that is, their usefulness can be tested.

Assistance to Firefighters Grant Program
: Promotesmitigation and preparedness in fire departments across the United States. Provides assistance to fire companies at state or local levels, enabling them to identify and obtain the necessary public safety resources. These one-year grants go directly to fire departments.

Best-practices approach Wisdom gained from practice
: learning from prior mistakes, sharing knowledge about innovative practices, and making improvements through analysis of after-action reports. If followed in accord with the social scientific approach, this approach may help produce scholarship that is a basis for practice.

Big science
: A term used to refer to fields of disaster study that require substantial outside funding and expensive technical equipment in order for scientists to pursue their research and experimentation, putting many disaster researchers in the world of government lobbying. One assumption of big science is that the growing dependence of researchers on government funding and participation means that more and more research has to be conducted under terms acceptable to the government.

Bioremediation
: The treatment of pollutants or waste(as in an oil spill, contaminated groundwater, or an industrial process) by the use of microorganisms (as bacteria) that break down the undesirable substances.

"Blue helmeted" peacekeeping soldiers
: Contri-buted by various member states, UN peacekeepers are "soldiers, police officers, and military observers" from the UN member countries. UN blue helmeted soldiers are paid volunteers, counted on to provide the logistical and physical contributions necessary to carry out UN disaster relief and recovery missions.

Boston Marathon bombing
: Two foreign terrorists built, planted, and detonated two pressure cooker bombs near the finish line of the marathon in April 2013 to retaliate against the United States for its military action in Muslim countries.

The twin blasts killed 3 people and wounded more than 260 others.[1]

Bottom-up approach

In U.S. intergovernmental relations, the assumption that primary responsibility for emergency management lies with local political subdivisions (towns, cities, and counties) and the local officials and emergency managers or responders within those respective jurisdictions.

BP Deepwater Horizon oil spill

An oil well erupted after a blowout caused a catastrophic explosion and fire aboard the British Petroleum (BP) PLC-leased Deepwater Horizon offshore oil-drilling platform. Eleven platform workers were killed and 17 others injured when the Deepwater Horizon exploded. Owing to the explosion and ensuing conflagration, the entire platform sank to the bottom of the sea two days after the incident began. A damaged wellhead on the sea floor, which had been truncated by the failure of the platform, plus the malfunction of the blowout prevention system, opened a path for discharge of crude oil at rates of up to 9,000 barrels (798,000 gallons) a day into the Gulf of Mexico, according to federal estimates.[2] The event began April 20, 2010, and lasted three months before the spill was ended.

Bureau of Political-Military Affairs

An agency within the U.S. Department of State that bridges with the U.S. Department of Defense (DOD). It provides policy in the areas of international security, security assistance, military operations, defense strategy and policy, military use of space, and defense trade. It is headed by the assistant secretary of state for Political-Military Affairs.[3]

Bureaucratic politics model

A set of theories that strive to explain the motives of public executives and managers as they make decisions. They suggest that the desire of these public officials to protect or promote their own and their agency's special interests, as they compete with other agencies, forms a major motivating factor in shaping the timing and the content of their decisions.

Bureaucratic "turf wars"

An expression that denotes heavy competition for jurisdiction and budget funding among government bureaus, agencies, and program offices—even those within the same department of the executive branch.

Buyout program

A program, usually noncompulsory, involving the direct government purchase of houses or other structures from owners, at fair market value, on account of extremely high disaster risk or repeated damage to the structures by the same disaster agent. Federal emergency managers sometimes use buyouts to help stanch the problem of recurring national flood insurance loss claims and to reduce government post-disaster relief spending.

Camcorder politics

Politicization of major and minor disasters before, during, and after the time they occur fueled by the ability, since the early 1980s, of television news to cover breaking stories worldwide through the use of portable camcorders, remote linkups aided by orbiting communications satellites, and other technology. News commentators and reporters as well as political officials and pundits help create a "politics of a disaster" and so are customarily parts of the phenomenon. The public's massive use of smart phones with video and Internet connectivity in recent years has increased the camcorder politics phenomena by many orders of magnitude. Citizen journalism and online video sharing through YouTube and other sites provide a daily stream of information to news organizations—some of which are exclusively found online.

CARVER technique

Developed by the military, it is a time management technique designed to evaluate the nation's critical infrastructure and has been used by federal agencies and various local governments since 2005. Developed by the U.S. Department of Defense (DOD) for military target prioritization purposes, the CARVER acronym stands for criticality, accessibility, recoverability, vulnerability, effect, and recognizability.

Catastrophic incidents

Any natural or man-made incident, including terrorism, which results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, and national morale or government functions.

Chemical, biological, radiological, or nuclear (CBRN)

Types of weapons of mass destruction that terrorists may seek to acquire and use. A core mission of U.S. Department of Homeland Security (DHS) policy is to prevent terrorists from obtaining, transporting, and detonating such weapons; denying them the opportunity to develop CBRN weapons on their own; and developing countermeasures and recovery strategies in the event a CBRN weapon is detonated or released.

Citizen Corps

An arm of U.S.A. Freedom Corps that invites people at the community level to volunteer. Citizen Corps councils working at the state and local level regularly receive federal funding used to promote training and education of community volunteers, in some ways helping them to respond to disasters or emergencies in their communities.

Civil defense

A U.S. national policy since World War I aimed at preparing the nation for possible attack by enemy nations. After 1949, civil defense policy transitioned to preparation for nuclear attack but became defunct after the end of the Cold War.

Civil defense preparedness

During the Cold War, from about 1949 to 1990, various civil defense measures were taken against the possibility of nuclear attack. Tools of civil defense preparedness have included mass evacuation planning, public shelter programs, and home fallout shelters.

Codified knowledge

Impersonal knowledge that is learned through thinking and reasoning, not through social relationships. Such knowledge is often conveyed through scholarly publications. Much technocratic knowledge is produced from data analysis, repeated experimentation, scientific study, and ultimately published research products. If such knowledge is widely diffused and open to the public, people have an opportunity to study, learn, and perhaps master such information. If it is not diffused, only those with permission and opportunity to see it may learn from it.

Command and control strategies

The hierarchical relations in which those in subordinate positions working in a bureaucratic organization are expected to strictly comply with the orders or instructions of their immediate supervisor, thus creating a chain of command.

Communities of practice (CoPs)

Groups of people who share a concern or a passion for something they do and they learn how to do it better as they interact regularly. A CoP is composed of practitioners or researchers who have specialized their work to address the concern they share.

Community of interest (COI)

A COI is a gathering of people assembled around a topic of common interest. Its members take part in the community to exchange information, to obtain answers to personal questions or problems, to improve their understanding of a subject, to share common passions, or to play.[4]

Community Emergency Response Teams (CERTs)

A Federal Emergency Management Agency(FEMA)-backed effort pursued on the local level in participating communities. CERTs members are unpaid, voluntary workers who are invited to earn qualifications for various types of post-disaster specializations, including elemental search and rescue, first aid, shelter management, and more.

Compensation statute

Laws that provide victims of wrongdoers, including victims of terrorists, legal recourse in which penalties involve payment to victims.

Complex humanitarian emergencies (CHEs)

The designation of a CHE signifies that a country or region is at or near complete breakdown of civil authority, something occasionally resulting from a major natural disaster. CHEs sometimes involve ethnic conflict, displacement of population groups, market collapse, and mass starvation. In a CHE, the success or failure of a disaster relief operation often rests on the degree of coordination, the fairness and equality in relief distribution, and whether the relief effort connects with (or at least does not impede) the country's reconstruction and economic development.

Complexity paradigm

A paradigm refers to how groups, particularly academic groups, go about determining and sanctioning what constitutes knowledge in their respective disciplines or fields. The complexity paradigm assumes that humans are not simply victims of disaster but that humans themselves contribute to hazardous processes and to disaster outcomes. The complexity paradigm makes a good case for interdisciplinary knowledge sharing and collaborative research in the disaster field generally. It also advocates ratcheting up the scale of research to consider global environmental change.

Complexity theory

A possible and evolving framework for understanding the nature of "wicked" problems, many commonly encountered in disaster management.[5] From a complexity theory perspective, public policy is "a self-organizational and dynamic complex system."[6] Complexity theory illustrates that policy problems are dynamic, that the policy process has multiple interacting components, and that multiple actors have conceptually unique mental models of policy problems. Core concepts of complexity theory—self-organization and system dynamics—can inform our mental models of social systems to help us understand and solve wicked problems.[7] There is as yet no complete and unified complexity theory, but rather it is a work in progress.

Compound disaster

A disaster that triggers a secondary hazard. Compound disasters can occur simultaneously or sequentially.

Congressional dominance model

Postulates that the political geography of presidential disaster declaration issuance over time demonstrates the Federal Emergency Management Agency (FEMA) effort to reward congressional lawmakers on its authorizations and appropriations oversight committees.

Conventional model of disaster relief

Administered by a variety of federal and state agencies; most notably if a state wins a presidential declaration of major disaster, the Federal Emergency Management Agency (FEMA) has an array of relief assistance programs. FEMA offers substantial assistance to individual households and to state and county governments covered by a declaration. The conventional programs of FEMA including housing assistance, emergency minimal repairs, special needs, other needs assistance, crisis counseling, unemployment benefits, legal services, and so on. Conventional disaster relief is comprised of several baskets of assistance available to survivors or victims who make application. Federal assistance dispensed from government programs in the form of grants, loans, or in-kind relief is aimed at meeting post-disaster *needs* of affected individuals, families, or businesses.

Coordinate-authority model

A theory of intergovernmental relations that assumes a sharp and distinct boundary between separate national and state governments. National and state governments appear to operate independently and autonomously, and they are linked only tangentially. In the model, local governments are abjectly dependent on their respective state governments.

Counterterrorism

Offensive measures taken to prevent, deter, and respond to terrorism and terrorist attacks. Along with antiterrorism, it is the core mission of U.S. Department of Homeland Security (DHS) policy and involves threat detection, prevention, mitigation, target hardening, policing, and other preparedness and response activities.

Crisis Counseling Assistance and Training Program (CCP)

The Federal Emergency Management Agency (FEMA)provides supplemental funding to a state government to help relieve any grieving, stress, or mental health problems caused or aggravated by a presidentially declared disaster or its aftermath.

Crisis Relocation Plan (CRP)

Part of civil defense planning against nuclear attack. Done at the state level with federal funds, common CRP activity included provision for population relocation, food distribution, and medical care.

Crying poor syndrome

An expression sometimes voiced by federal officials to characterize the behavior of governors, mayors, or other government leaders seeking presidential declarations of major disaster. They allege that these leaders "cry poor" after relatively small-scale disasters by insisting that their respective jurisdictions are unable to

respond to or recover from the "disaster" without the federal help a disaster declaration would provide. Sometimes, governors and other state officials accuse local government officials of engaging in the same behavior in order to secure undeserved state disaster relief.

Cybersecurity

Computer hackers who disrupt Internet usage recognized as potential "terrorists" and purveyors of disaster. By the 1990s, cyberattack disasters and emergencies that damaged or threatened to damage critical infrastructure systems and facilities became a new core area of responsibility for the Federal Emergency Management Agency (FEMA). The vulnerability of these systems and facilities to both terrorism and natural disaster forces encouraged policymakers to fund scientific and engineering endeavors aimed at advancing the fortification and resilience of these systems and structures.

Decentralization

Refers to the decentralized nature of the U.S. government and its functions; it is necessary due to the great size and population of the nation, the thousands of subnational governments, and the U.S. system of federalism. It is also part of a national policy of devolution of certain federal powers back to the state and local levels.

Development banks

Institutions, called multilateral development banks and multilateral financial institutions, which provide financial support and professional advice for economic and social development activities in developing countries. The World Bank and International Monetary Fund are two examples. Many have taken considerable interest in disaster management.

Disaster Assistance Response Team (DART)

Dispatched by the Office of U.S. Foreign Disaster Assistance (OFDA), a DART assesses the scope of damage, proposes a strategy, and estimates how much assistance is required and what it will cost.[8] The response team often provides logistical support to and coordinates the efforts of all actors and responders involved. These include the UN and other international organizations, nongovernmental organizations (NGOs), and governments. DARTs monitor and evaluate U.S. operations as well.

Disaster management

The tactical and operational implementation of an emergency planning strategy at the time of a crisis. In presidentially declared emergencies and disasters, emergency managers are also disaster managers both in strategic and tactical terms. The terms *disaster management* and *emergency management* are often used interchangeably in this book.

Disaster Mitigation Act of 2000 (DMA 2000)

Amended the 1988 Stafford Act and gave the Federal Emergency Management Agency (FEMA) authority to establish a program of technical and financial assistance for enhanced pre-disaster mitigation directed to state and local governments. FEMA was to help state and local governments develop and carry out pre-disaster hazard mitigation measures that were cost effective and designed to reduce injuries, loss of life, and damage to and destruction of property, including damage to critical services and facilities under the jurisdiction of the states or local governments. Mandated that states prepare a comprehensive state program for pre-disaster emergency and disaster mitigation before they could receive post-disaster declaration mitigation funds from FEMA. It also required local governments to identify "potential mitigation measures that could be incorporated into the repair of damaged facilities" before being eligible for pre- and post-disaster funding. The aim of this policy was to encourage local governments to engage in mitigation activities such as "hazard mapping, planning, and development of hazard-sensitive building codes."

Disaster recovery

Often the most expensive and most protracted phase of the disaster cycle. The term has different meanings in different contexts. It involves restoration, rebuilding, and return to normalcy. The pool of players involved in recovery is often huge and far exceeds the number of players usually involved in disaster response. Late stages of disaster recovery may involve only relatively small numbers of emergency managers. Decisions regarding disaster recovery are fundamentally made at the local level of government.[9]

Disaster recovery centers (DRCs)

Established in affected communities where individuals can discuss their disaster-related needs, learn how to apply for various types of assistance or check on the status of their applications, and learn more about

mitigation measures to reduce future risk. Federal and state agencies staff DRCs with knowledgeable officials who provide recovery program information, advice, counseling, and technical assistance.

Disaster Reduction and Recovery Program

A UN program focused on the demobilization of combatants, land mine clearance, the reintegration of refugees and internally displaced persons (IDPs), and a plan for restoration of governance in a disaster-affected country.[10]

Disaster Relief Act of 1974

Created a program that provided direct assistance to individuals and families following a disaster. Although preceding laws had provided temporary housing aid and other modest forms of individual assistance, the new Individual and Family Grant (IFG) program—later renamed the Individual and Households Program (IHP)—finally bridged the gap that had existed between public and individual assistance. It also brought state and local governments into all-hazards preparedness activities and provided matching funds for their emergency management programs. The act also authorized in law the emergency declaration category of presidential declaration. Granting the president authority to issue emergency declarations opened the door to governor-requested, president-approved proactive federal mobilization for disasters that had not yet transpired but appeared imminent.

Disaster Relief Fund

The main repository of federal disaster spending authority available to the president. Funded from an annual congressional appropriation and from residual, accumulated spending authority on previous disasters, it is often replenished and expanded to pay for extremely costly disasters by congressionally approved disaster supplemental appropriations.

Disaster research

Conducted by a broad array of experts in the physical sciences and engineering, the geosciences, the atmospheric sciences, biomedicine, physical geography, and the information sciences. Researchers also include disaster sociologists, political scientists, economists, social geographers, demographers, and urban planners.

Disaster resilience

The concept of resilience has found many advocates in the emergency management community. One way to reduce the impacts of disasters on the nation and its communities is to invest in enhancing resilience. Resilience is *the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events*. Enhanced resilience allows better anticipation of disasters and better planning to reduce disaster losses—rather than waiting for an event to occur and paying for it afterward.[11]

Disaster Unemployment Assistance Program (DUA)

Administered by the state and supported by the Federal Emergency Management Agency (FEMA) and the Department of Labor. Benefits and reemployment services are available to individuals who become unemployed due to a major disaster, beginning with the date the individual was unemployed and extending as long as twenty-six weeks after the major disaster declaration.

Dispersants (in oil spills to the sea)

Dispersion is the tendency of crude oil to break up into droplets within water. This increases the surface area and allows further dissolution and evaporation of the light end of the hydrocarbons.[12] It is possible to spray various chemicals over an oil slick in order to promote this process. However, many chemical dispersants and the dispersed oil itself contain toxins damaging to organisms and the food web. This makes dispersant use environmentally controversial.

Distributive politics

A theory of political science that holds that political actors, most particularly elected legislators, have great incentive to ensure that government programs and their administrators work to the benefit or over-benefit of the constituencies they respectively represent. Often in distributive politics government resources are allocated in excess of genuine need. Distributive politics is tolerated in part because it provides lawmakers with electoral advantages and because lawmakers themselves devise allocation rules and sometimes influence discrete public spending decisions. Also, benefit receivers are narrowly localized and payers are broadly national. In other words, those who benefit receive their gain at seemingly no cost to themselves, and those who do not benefit are so numerous, dispersed so broadly, and pay individually only pennies of the cost that

they are indifferent about what the distributive expenditure costs them: benefits targeted, funding base broad. Inefficient public budgeting but highly popular, rational behavior for elected officials.

Domestic incidents

Acts of terrorism and disasters in the homeland stemming from natural or other human causes. Their management was addressed by the secretary of homeland security in the National Response Plan (NRP) and the National Incident Management System (NIMS). In official terms, domestic incidents came to represent a marriage of conventional disaster management and terrorism consequence management.

Doppler radar

A type of detection technology used by the National Weather Service (NWS) at facilities across the country. The early detection of tornadoes that Doppler radar may provide could allow authorities to issue lifesaving watches or warnings before a tornado forms or in advance of its impact.

Dual federalism

A government system in which sovereignty is constitutionally split between at least two territorial levels so that units at each level have final authority and can act independently of the other in some areas. Citizens thus have political obligations to two authorities. In U.S. history, the period from 1789 to 1901 has been termed the era of "dual" federalism, because there was little collaboration between the national and state governments.

Dual-use approach

Approved in law in 1973, an approach in which civil defense activities could also be used conjointly to prepare for natural disasters; the merging of civil defense and natural disaster management.

Earthquake retrofitting

Structural improvements made to existing buildings or infrastructure that enable these structures to retain their integrity and protect their occupants against seismic forces greater than those they were originally designed to withstand.

EMAP Standard

The Emergency Management Accreditation Program (EMAP), a joint project of the Federal Emergency Management Agency (FEMA), the International Association of Emergency Managers (IAEM), and the National Emergency Management Association (NEMA), sets forth an appropriate level of emergency management capacity. State and local governments, through a series of steps, are peer reviewed and ultimately judged worthy or unworthy of EMAP Standard accreditation. It is also an internationally recognized standard of emergency management based on the National Fire Protection Association (NFPA) 1600 standards (also acknowledged as the national preparedness standard for the private sector) and were developed by state, local, and federal emergency management practitioners.

Emergency

A condition of disaster or of extreme peril to the safety of persons and property caused by such conditions as air pollution, fire, flood, hazardous material incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations or disease, warning of an earthquake or volcanic eruption, or other conditions.

Emergency Alert System (EAS)

A national public warning system that requires TV and radio broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service providers, direct broadcast satellite service providers, and wireline video service providers to offer to the president the communications capability to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information such as Amber (missing children) Alerts and emergency weather information targeted to a specific area.[13]

Emergency declaration

A category of presidential declaration authorized in law in the Disaster Relief Act of 1974 and issued as a matter of life and safety before an event or when a disaster is still transpiring. Unlike major disaster declarations, emergency declarations can be issued by the president with or without a governor's request, and governors are not required to document need or estimate losses as a condition of their request.

Emergency declaration assistance

Type of assistance provided by the federal government under a presidential declaration of emergency, which

confers a more modest range of assistance than does a declaration of major disaster. State and local governments receive support and technical help and various forms of federally dispensed emergency aid including debris removal grants. Disaster victims are entitled to receive grants for temporary housing and for uninsured personal needs, as well as medicines, food, and consumables.

Emergency management

The discipline and profession of applying science, technology, planning, and management to deal with extreme events that can injure or kill great numbers of people, do extensive property damage, and disrupt community life. Efforts are made to limit losses and costs through the implementation of strategies and tactics reflecting the full life cycle of disaster: preparedness, response, recovery, and mitigation.

Emergency Management Accreditation Program (EMAP)

Organization that maintains a voluntary assessment and accreditation process for state or territorial, tribal, and local government emergency management programs. EMAP conducts baseline assessments of all state and territorial emergency management programs. EMAP combines self-assessment in accord with accepted national standards; documentation of compliance; independent evaluation by trained assessors; and, for accreditation, committee and commission review.

Emergency Management Assistance Compact (EMAC)

Originally an agreement between fourteen states and territories made during 1995 and 1996 that committed them, through their respective governors, to cooperate in planning for state-to-state extension of emergency management help. Today, all the states belong to EMAC.

Emergency Management Institute (FEMA)

Is part of the U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA). The Emergency Management Institute provides national leadership in developing and delivering training to ensure that individuals and groups having key emergency management responsibilities, including FEMA employees, possess the requisite skills to effectively perform their jobs.[14]

Emergency-management–oriented multinational organizations

Organizations working independently or through multistate arrangements that promote emergency management work and capabilities in developing nations.

Emergency Management Performance Grants (EMPGs)

Allocated by the Federal Emergency Management Agency (FEMA) to state and local governments to improve their intrastate emergency management programs and their mitigation, preparedness, response, and recovery capabilities for disasters of any type.

Emergency manager

A person who manages a comprehensive program for hazards and disasters and who is responsible in whole or in part for disaster mitigation, preparedness, response, and recovery within his or her government jurisdiction or organization.

Emergency operations center (EOC)

An organizing concept as well as a central management and coordination facility responsible for carrying out emergency management or disaster management functions at a strategic level in an emergency situation. EOCs, when activated at the municipal level, provide a site in which leaders and representatives of government agencies (all levels), nonprofit disaster assistance organizations, critical corporations (particularly public utility companies), and others meet, confer, render decisions, and communicate with one another and externally to others. EOCs are usually preestablished, and they endeavor to support disaster managers in the field, including incident commanders.

Emergency Response Division

A division of the United Nations Development Programme (UNDP) created in 1995. It deploys response teams to disaster sites to help coordinate relief and recovery efforts of other UN agencies and non-governmental organizations (NGOs) with the efforts of disaster-stricken national governments. The teams also prepare comprehensive redevelopment projects in disaster recovery operations.

Emergency supplementals

Congressional appropriations often used to pay for mega-disasters or catastrophes that have swallowed up all or most available spending authority in the president's Disaster Relief Fund. Legislators sometimes use this almost veto-proof legislation to add non-germane spending riders (special amendments) that would not win

majority votes or enactment any other way. This sometimes results in wasteful spending. The vast majority of emergency supplementals are funded by federal borrowing rather than new revenue schemes or budget reprogramming of funds dedicated to certain discretionary spending purposes.

Emergent organizations

Organizations that form spontaneously after a disaster, often from the efforts of volunteers. Some emergent organizations become long-standing established bodies, some take on new problems, while others fade away once their purpose is served or when their volunteers leave and their donor funding ends.

Entitlement program

A type of government program that provides individuals, and sometimes corporations or state or local governments, with financial benefits or special government-provided goods or services under terms in which beneficiaries have a legal right (enforceable in court, if necessary) to the benefits whenever they meet eligibility conditions that are specified by the law that authorizes the program. Spending control over entitlements only comes through changes in the legal rules of the program, not as a result exhausting of budget authority allotted to the program. In other words, entitlement funding each budget year is a function of the number of claimants, ultimate payouts, and the rules of the program—so-called mandatory spending. Budgeting funds in advance for entitlement programs is extremely difficult and many entitlement programs exceed their budgets each year because the number of claimants and payouts are often underestimated and difficult to predict.

Ethical code

Expresses principles and practices of behavior. Often adopted by a profession and promulgated by a government agency responsible for licensing a profession. Violations of these codes may be subject to remedies that are administrative (e.g., loss of license), civil, or criminal.

Event driven

Decisions on policy and politics influenced by the latest memorable disaster or catastrophe. The flaws of event-driven policymaking include a preoccupation or fixation with the type of major disaster that most recently occurred; a failure to maintain a coherent, balanced, all-hazards emergency management capability; and a tendency to be underprepared for disasters that do not mimic or parallel the last major disaster or catastrophe.

Exxon Valdez oil spill

On March 24, 1989, the oil tanker *Exxon Valdez* struck Bligh Reef in Prince William Sound, Alaska, spilling more than 11 million gallons of crude oil. The spill was then the largest in U.S. history and tested the abilities of local, national, and industrial organizations to prepare for, and respond to, a disaster of such magnitude. Many factors complicated the cleanup efforts following the spill. The size of the spill and its remote location, accessible only by helicopter and boat, made government and industry efforts difficult and tested existing plans for dealing with such an event. The spill posed threats to the delicate food chain that supports Prince William Sound's commercial fishing industry. Also in danger were 10 million migratory shore birds and waterfowl; hundreds of sea otters; dozens of other species, such as harbor porpoises and sea lions; and several varieties of whales.[15]

Faith-based nonprofit voluntary organizations

Organizations established by recognized and organized religions. Those that accept federal disaster relief funding are prohibited from engaging in unlawful forms of discrimination and from proselytizing their religion or distributing religious materials in the course of dispensing government-furnished disaster relief.

Federal Disaster Relief Act of 1950

Provided an orderly and continuing means of assistance by the federal government to states and local governments in carrying out their responsibilities to alleviate suffering and damage resulting from major disasters, including floods. It created the first permanent system for disaster relief without the need for congressional post-disaster action. It also clearly stated for the first time that federal resources could and should be used to supplement the efforts of others in the event of a disaster. The law made federal disaster assistance more immediately accessible because it no longer required specific congressional legislation to address each new disaster but instead simply allowed the president to decide when federal disaster assistance was justified and necessary.

Federal Response Plan (FRP)

A plan that established a process and structure that was more systematic, coordinated, and effective in delivery of federal assistance, all to address the consequences of any major disaster or emergency. The FRP also directly stated that sometimes a major disaster or emergency may affect the national security of the United States. Devised over the late 1980s and formally emplaced in 1992, the FRP was based on a template of emergency support functions (ESFs) that drew on the personnel and resources of a wide range of federal agencies, some with lead authority for certain support functions. It was revamped to include terrorism response after the 9/11 attacks, and it remained federal policy until it was replaced by the National Response Plan (NRP) in 2003.

Federal-state agreements

Usually negotiated agreements between specific federal agencies and their state government agency counterparts. From about 1979 through 2003, the Federal Emergency Management Agency (FEMA) relationship with states and localities was primarily through agreements with state offices of emergency management and then, by extension, with local emergency management offices.

Federal zoning

Zoning by the authority of the federal government. It is fiercely contested by protectors of local land-use authority, who perceive it as federal encroachment into matters of local land-use, zoning, and building regulation. This perception has sometimes impeded federal efforts to promote disaster mitigation at the local level, such as National Flood Insurance Program (NFIP) risk mapping of local governments.

Federalism

The theory or advocacy of federal political orders, where final authority is divided between subunits and a center. Unlike a unitary state system, in a federal system sovereignty is constitutionally split between at least two territorial levels so that units at each level have final authority and can act independently of the others in some area or domain of policy.

FEMA standard federal regions

Ten regions geographically distributed in accord with the ten standard federal region format used by most federal departments and agencies. Each is directed by a politically appointed regional director, whose regional offices are located in a major city of the respective region.

FEMA temporary housing assistance

Money to rent a different place to live or a temporary housing unit (when rental properties are not available). Money for homeowners to repair damage from the disaster that is not covered by insurance. The goal is to repair the home to a safe and sanitary living or functioning condition. The Federal Emergency Management Agency (FEMA) may provide up to the Individuals and Households Program (IHP) maximum for home replacement. Direct assistance or money for the construction of a home occurs only in very unusual circumstances, in locations specified by FEMA, where no other type of housing assistance is possible.

Fire Investment and Response Enhancement (FIRE) grants

Awarded to local fire departments for equipment, protective gear, training, and prevention programs. FIRE grants may be used to hire or train personnel, buy more equipment, or develop prevention plans, all aimed at improving response. Allows underfunded fire departments to purchase equipment and receive training it could not otherwise afford.

Fragmented government responsibility

The United States has a highly decentralized, federal system of government, which under the U.S. Constitution affords the national government a range of authority. Some powers are reserved for the states under the Tenth Amendment. Similarly, in some states, local governments, although legally vestiges of their respective state government, possess certain powers under home rule provisions approved by their states, by their state constitution, or through enabling statutes. The federal system of layers of governments tends to fragment responsibility.

Fraudulent claims

False documentation or other forms of deceit in people's applications for government assistance. Government efforts to prevent and ferret out fraudulent claims often have the unintended consequence of delaying or complicating delivery of program assistance to claimants who legitimately deserve the aid they apply for.

Fukushima Daiichi nuclear power plant disaster

Following a major earthquake, a fifteen-meter-high tsunami disabled the power supply and cooling of three Fukushima Daiichi reactors, causing a nuclear accident on March 11, 2011. Three reactor cores largely melted in the first three days. High radioactive releases occurred over four to six days. Over 100,000 people had to be evacuated from their homes in the vicinity of the plant. Owned by Japan's Tokyo Electric Power Company (TEPCO), plant managers and operators are still struggling to prevent radiation leaks to the air, ground, and sea.

Fusion centers

The Law Enforcement Terrorism Prevention Program (LETPP) uses so-called fusion centers, which provide a nexus of local, state, and federal terrorism-focused law enforcement interchange, and local emergency managers are part of this nexus.

"Gap group" clients

Those who fall between the cracks and are denied, or unable to qualify for, government post-disaster assistance; some are low income but not poor enough to qualify for government individual and household cash assistance, which is means tested. Some lack proper documentation, some cannot prove they live in the area of the disaster, others filled out their application for aid incorrectly, some cannot get through tele-registration to file a claim with the Federal Emergency Management Agency (FEMA), some have not be able to find local disaster service centers where they can make application, etc. The point is that there are a host of reasons why people fall into unassisted gap groups.

Generalists

Broadly educated people, who in public management are likely to be highly politically responsive and able to fulfill government executive obligations of public responsiveness. It is assumed that generalists are better able than specialists to address humanitarian aspects of disaster assistance and are better able to work compatibly with others in the intergovernmental world of domestic disaster management.

Generalized knowledge

Furnishes reasoning tools or conceptual lenses that hold explanatory power applicable within or across a wide variety of cases and circumstances.

Globalizing forces

The massive movement of individuals, capital, goods, information, and technologies across borders, which bonds developing nations to new and old industrialized nations. Disasters and this interdependence combine to produce negative, destabilizing effects in many developing nations.

Hamiltonian approach

Officials as managers expect others, especially strong elected executives, to judge them by whether or not their efforts produce the desired results. They work under after-the-fact accountability, and their concerns are performance and evaluation under public law. Requires education, professionalism, knowledge, skills, and abilities. One makes independent judgments and decisions drawing on one's authority of expertise.

Hamiltonian public managers

A normative theory of public management in which public managers must learn and apply a growing body of knowledge, some of it practical knowledge and some of it academic knowledge. Hamiltonian public managers embody an authority of expertise, have mastered a specialized field of theoretical and applied knowledge, and are considered technocratic officials.

Hazards

A potential threat to humans and their welfare arising from a dangerous phenomenon or substances that may cause loss of life, injury, property damage, and other community losses or damage.

Hazards U.S. (HAZUS)

See the definition for HazardsU.S.-Multi-Hazard (HAZUS-MH).

Hazards U.S.-Multi-Hazard (HAZUS-MH)

An earthquake computer simulation applicable and adaptable to most of the nation developed by the Federal Emergency Management Agency (FEMA) in the 1990s, it is a powerful risk assessment software program for analyzing potential losses from earthquakes. HAZUS-MH, a newer generation of HAZUS, models potential losses from hurricanes, winds, and floods as well as earthquakes for specific locations across the nation.

Home rule

In some states, local governments are accorded certain powers under home rule provisions of the state constitution, or through enabling statutes. It is the right to local self-government including the powers to regulate for the protection of the public health, safety, morals, and welfare; to license; to tax; and to incur debt. Home rule involves the authority of a local government to prevent state government intervention with its operations. The extent of its power, however, is subject to limitations prescribed by state constitutions and statutes.[16]

Homeland Security Act of 2002

Authorized creation of U.S. Department of Homeland Security (DHS), a superdepartment opened in 2003 and today has some 220,000 employees. It was formed by transferring some twenty-two federal agencies or offices into the new department. The DHS secretary, holding cabinet rank, and deputy secretary are managerial supervisors of the Federal Emergency Management Agency (FEMA) administrator. The law also recruited state and local government into the nation's war on terror.

Homeland Security Advisory System (HSAS)

A threat-based, color-coded, five-tiered system used to communicate to the American public and safety officials the status of terrorist threat to the nation or to parts of the nation. Replaced by the National Terrorism Advisory System (NTAS) in April 2011.

Horizontal fragmentation

Sometimes occurs when a disaster or emergency must be addressed by many different and competing government agencies, all working at the same level of government but with different duties and functions and sometimes overlapping jurisdictions. Common when officials of these agencies fail to coordinate their responsibilities with one another, act too independently of one another, duplicate their efforts, or work at cross-purposes with one another.

Humanitarian assistance

Involves concern for human welfare and social reforms. Within the realm of disaster humanitarian assistance, acute post-disaster concerns involve providing emergency food, water, shelter, medical services and supplies, clothing, and other items to disaster victims in order to ensure their immediate survival. From a U.S. government perspective it also means humanitarian assistance is used to encourage democracy and building structures favorable to sustainable political and economic development. In this way the U.S. government gains and keeps allies and promotes other U.S. interests, among them the security of the United States itself. In providing disaster aid to the people of other nations, an American secondary agenda is to prevent recipient nations from political or economic collapse, to forestall their subversion by enemies of the United States, and to prevent the spawning of failed states that may evolve into rogue states.

Humanitarian Assistance Survey Teams

Are often sent to evaluate the needs on the ground to ensure that the intervention is proceeding effectively. An instrument of the U.S. Department of Defense (DOD) used in circumstances of foreign disaster relief aid.

Incident Command System (ICS)

A standardized on-scene, all-hazards incident management system required by the U.S. Department of Homeland Security (DHS). It had been used by many firefighters, hazardous materials teams, rescuers, and emergency medical teams before its adoption as a key component of the National Incident Management System (NIMS) under Homeland Security Presidential Directive (HSPD-5) in 2005. It is a management system designed to integrate resources so as to effectively attack a common problem.

Incident Management CORE Employee (FEMA)

Two-year, full-time, exempted service appointments. According to the agency, "These CORE positions establish a new opportunity within the disaster workforce and successful candidates will be afforded the opportunity to be deployed for up to 300 days per year. The incumbents will serve as mid-level emergency managers at Joint Field Offices in support of disaster and emergency operations." CORE workers help FEMA maintain a regular state of readiness, for response to major events. Though CORE people could be assigned anywhere across the United States, general management and oversight will be maintained geographically by each Federal Emergency Management Agency (FEMA) region.

Incidents of national significance

High-impact events that under the former National Response Plan (NRP) require an extensive and well-coordinated multiagency response to save lives, minimize damage, and provide the basis for long-term community and economic recovery. The president or the secretary of homeland security had authority to declare incidents of national significance, which may be acts of terrorism or major disasters or emergencies. The term *incidents of national significance* was discontinued in 2008 when the National Response Framework (NRF) replaced the NRP. The term was judged to be confusing, duplicative, and a questionable grant of authority to the secretary of the U.S. Department of Homeland Security (DHS).

Inclusive-authority model

A model of intergovernmental relations in which each level of government has a diminishing proportion of responsibilities, from the national to the state to the local government level. The federal government coordinates and shares power and responsibility; however, the authority is essentially hierarchical (top-down control).

Individual and Family Grant (IFG) program

Federal Emergency Management Agency (FEMA)-funded state-administered program that under a presidential declaration of major disaster provided disaster victims cash help for essential needs. Established by the Disaster Relief Act of 1974, IFG operated as a means-tested grant program for victims of presidentially declared disaster. The grant could be used for home repair; vehicle repair or replacement; as well as for medical, dental, funeral, transportation, and other disaster-related costs. As long as insurance claim payouts for these needs was counted first, IFG could cover eligible remaining uninsured losses. A grant may help pay to fix or replace furniture, appliances, and other essential property. The grants may also help victims pay for moving and storage expenses, sandbagging, and mobile home towing,[17] IFG required 75 percent/25 percent federal/state dollar matching. IFG was renamed the Individuals and Households Program (IHP) in mid-2002, and it was merged with another FEMA housing program.

Individual and household assistance

The Federal Emergency Management Agency (FEMA) financial grants to rent alternative housing; direct assistance through temporary housing units (mobile homes); limited financial assistance for housing repairs and replacement; and financial assistance for uninsured medical, dental, funeral, personal property, transportation, and other expenses. It is delivered through a variety of FEMA program and subprogram offices.

Individuals and Households Program (IHP)

Launched in 2003 and called the Individual and Family Grant (IFG) program from 1974 to 2002, the IHP encompasses a set of federal post-disaster assistance programs available to individuals, families, or household groups under terms of a presidential declaration of major disaster or emergency. Among types of aid are financial grants to rent alternative housing; direct assistance through temporary housing units (mobile homes); limited financial assistance for housing repairs and replacement; and financial assistance for uninsured medical, dental, funeral, personal property, and transportation expenses. Some are federal funded but state-administered programs that under a presidential declaration of major disaster, provide disaster victims cash help for essential needs. Authorized by the Disaster Relief Act of 1974, IFG and later IHP are 100 percent federally funded with the exception of a 75 percent/25 percent federal/state matching requirement for its Other Needs Assistance program. IHP is a major human services program managed by the Federal Emergency Management Agency (FEMA).

Intergovernmental relations

The interaction and exchanges of public and private organizations across all layers of government. Intergovernmental relations reflect the growth of societal interdependence, in economic and technological terms, and have created a webbed and networked system of governance.

International Association of Emergency Managers (IAEM)

A nonprofit educational organization dedicated to promoting the goals of saving lives and protecting property during emergencies and disasters. IAEM is primarily composed of local emergency managers. It operates a Certified Emergency Manager (CEM) program.

Interstate compacts

An agreement between two or more states of the United States. Article I, Section 10 of the U.S. Constitution provides that "no state shall enter into an agreement or compact with another state" without

the consent of Congress.

Issue-attention cycle

A pattern of public perception of certain domestic problems. The cycle has five stages and concerns the way major communications media interact with the public.

Issue salience

The importance of an issue to the public and to elected leaders.

Jacksonian approach

Highly populist, advocates decentralization, which grants local governments greater autonomy with direct governance, concentrates authority in elected executives, minimizes legislative interference in public management, and allows elected executives to appoint their political partisans and allies to many government jobs.

Jacksonian public managers

Self-reliant, courageous, individualistic, and entrepreneurial public managers who construct their own destiny despite once working within the patronage system of placing political supporters into appointed government offices. Jacksonian public managers present themselves as bold, prominent figures and assert their personality with zeal while adhering unconditionally to their beliefs.[18] They articulate public desires sometimes in defiance of political elites, particularly legislators, whom they tend to view with profound suspicion. Individualistic and entrepreneurial, the Jacksonian public manager will take the initiative and pursue new directions in light of government perversion or inefficiency.[19]

James Zadroga 9/11 Health and Compensation Act

James Zadroga was a New York police detective who worked for hundreds of hours on the smoldering pile at ground zero after the 9/11 attacks and whose subsequent death led to a fierce public debate about the health problems suffered by rescue workers after 9/11. The new law reopened the September 11th Victim Compensation Fund (VCF) and extended the period of eligibility beyond the seventy-two-hour limit for seeking medical treatment on 9/11 to a longer period. The law is designed to include rescue, recovery, and cleanup workers. It was approved with an infusion of up to $3.2 billion of new September 11th VCF spending authority, and the program will expire in 2016. Feinberg is not master of the reopened September 11th VCF; a new official has been appointed to the job.

Japan Meteorological Agency (JMA)

Leads Japan'smitigation and prevention of natural hazards, particularly those capable of catastrophic consequences. The office is within the Ministry of Land, Infrastructure, and Transport and part of the Courts branch of government. Responsible for tracking all weather-related phenomena as well as monitoring, predicting, identifying, and measuring seismic events associated with tsunamis, earthquakes, and volcanoes. The agency is charged with both detecting earthquakes and formulating earthquake warning messages communicated to appropriate audiences.

Jeffersonian approach

Calls for administrators to maintain community support and support from senior elected and appointed officials, the news media, and the public as much as possible. Requires that one possess not only skill in consultation, negotiation, and communication but also deftness in probing for public understanding and consent.

Jeffersonian public managers

A normative theory of public management in which public managers possess skill in consultation, negotiation, and communication and deftness in probing for public understanding and consent. Jeffersonian public managers are broadly educated generalists who are strictly accountable to the public and to elected overseers.

Justice for Victims of Terrorism Act of 1996

Stipulated that the federal government make payments to states, public agencies, and nongovernmental organizations (NGOs) to help terrorism victims. The measure facilitated crisis response efforts directed to the victims of the 1995 Oklahoma City terror bombing.

Kenneth R. Feinberg

Attorney who served as Special Master of the September 11th Victim Compensation Fund (VCF) and who received the claims of petitioners and made determinations regarding deservedness. As Special Master,

Feinberg accepted or rejected petitions and determined the amount of claim money paid out to each petitioner. He also served as master of the Deepwater Horizon Oil Spill Trust fund and the Virginia Tech Hokie Spirit Memorial Fund.

Lack of technical expertise

A common criticism of many emergency managers owing to confusion about the kind of expertise one needs to be an effective emergency management. Controversy about the technical expertise needed to identify and assess hazards adequately, predict the occurrence of disasters, and provide the requisite technical information for the design and implementation of effective programs in emergency management. Even when hazards have been identified, it is often unclear just how much risk is involved and how this risk is to be measured. Emergency management as a field is highly dynamic, so the education and skills required to do it are ever changing.

Law Enforcement Terrorism Prevention Program (LETPP)

Supports law enforcement communities in their efforts to detect, deter, disrupt, and prevent acts of terrorism. Categories of aid include information sharing to preempt terrorist attacks; target hardening to reduce vulnerability of selected high-value targets; recognition and mapping of potential or developing threats; interoperable communications; and interdiction of terrorists before they can execute a threat or intervention activities that prevent terrorists from executing a threat. Employs fusion centers.

Legislative theory model

Characterized by "politicallydriven, distributive politics" in which elected local public officials, including lawmakers in Congress, are likely to respond to disasters not on the basis of whether or not their local government has the ability to respond and recover on their own but on the basis of demanding federal and state assistance to meet constituent needs. These officials want to be reelected and thus they wish to curry favor with their electorate by providing tangible benefits for which they can claim credit.

LIDAR (specialized side-looking radar technology)

Can aerially provide hyperaccurate maps of how far and where storm surges may penetrate inland.

Limited federal response

The tendency of Congress to pass a new law in the aftermath of each major disaster that provides additional routine relief funding, often largely symbolically, but which does little to address either the fundamental underlying causes of the disaster or problems in the system of disaster management as a whole.

Local emergency management committees (LEMCs)

A disaster-planning network used by local emergency managers that increases coordination among local agencies.[20] LEMCs succeed when they effectively receive and respond to community information requests, when they establish and maintain good working relationships with people of the news media, when they earn and maintain local support, and when they retain the confidence and backing of local officials.[21]

Long-term recovery

"Addresses the basic dimensions of a community's existence: permanent housing, economic conditions, the environment, the infrastructure (e.g., roads, bridges), and lifelines (e.g., water, power, telephone service)."[22]

Love Canal, in Niagara Falls, New York, hazardous waste incident

In 1978, Love Canal, located near Niagara Falls in upstate New York, was a modest working-class enclave with hundreds of houses and a school. Unfortunately by the early to mid-1970s it was found to sit atop 21,000 tons of toxic industrial waste that had been buried underground in the 1940s and 1950s by a local company. Over the years, the waste began to bubble up into backyards and cellars. By 1978, the problem was unavoidable, and hundreds of families sold their houses to the federal government and evacuated the area. The disaster led to the formation in 1980 of the Superfund program, which helps pay for the cleanup of toxic sites.[23]

Major disaster

"Natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mud-slide, snowstorm, or drought) or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under federal law to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby."[24]

Major disaster assistance

Post-disaster federal assistance made available to disaster victims, as well as to state and local governments, under the terms of a presidential declaration of major disaster.

Major disaster declaration

A category of presidential declaration established initially by the Federal Disaster Act of 1950 and revised and augmented by the Stafford Act of 1988. It opens the door to federal disaster assistance, mobilizes federal agencies to respond in accord with a national response plan or framework, specifies one or more political jurisdictions (a state and eligible counties), delineates who is eligible for relief, and contains an initial statement about the kinds of assistance people or subnational governments may request. Acting on a governor's request for such a declaration, the president has authority to approve it or turn it down. Incorporated municipalities in a county are eligible to receive federal assistance under a major disaster declaration through county government and often under conditions set in place by the respective state government.

Marginal disaster request approvals

Governor requests for presidential disaster declarations arguably not major destructive events but that the president has nonetheless approved as a major disaster or emergency under his authority to declare disasters. Event judged to be at or barely over the threshold required for administrative approvability. It is also possible that the event did not meet Federal Emergency Management Agency (FEMA) mimimum conditions of qualification but fell below its per capita damage approval threshold, and the president chose to approve the request regardless.

Marginal disaster request denials

Governor requests for presidential disaster declarations that are arguably "not" major destructive or threatening events and that the president has asked the Federal Emergency Management Agency (FEMA) administrator to turn down. Event judged to be at or under FEMA threshold required for administrative approvability. President assents to the FEMA turndown recommendation. To this author's knowledge, no one has been able to factually prove that any president rejected a governor request for a declaration of major disaster or emergency despite a FEMA recommendation to approve that request.

Marginal disasters

Those events that are far less than catastrophic, that are not matters of national security, and that are near or within the response and recovery capacity of the state or states in which they occur.[25] Low-damage, marginal incidents, involving relatively low federal payouts and usually a small portion of a local area, and few to no fatalities and injuries. The smaller the federal payouts are for various declarations the higher the probability that political considerations at the presidential level played a role in a president's approval of a declaration.

Martial law

Temporary rule by military authority imposed upon a civilian population in time of war or when civil authority is unable to maintain public safety. In the United States both the president and state governors hold authority to declare martial law. Presidents are likely to apply it only under extreme conditions of war, national emergency, or crisis. Governors sometimes declare martial law in state emergencies and disasters, using the state National Guard to carry it out.

Master model of compensation

Administered by one person, an appointed Special Master, who has the sole responsibility for receiving claims and making grant determinations. While this model has been utilized in other fields, most notably in making payouts to victims and relatives of asbestos-caused illnesses and cancers, the September 11th Victim Compensation Fund (VCF) represented its first application in federal disaster assistance, and it proved to be a very personal and controversial way to distribute disaster relief.

Memorandums of understanding (MOUs)

Administrative agreements, usually voluntary and usually negotiated by officials of various government agencies, which in emergency management establish commitments regarding how each agency will cooperate with the others and what specific duties will be performed in future disasters or emergencies.

Metropolitan Medical Response System (MMRS)

Developed after the 1995 Oklahoma City bombing to ensure that big-city police and fire departments had

the training and equipment to care for multiple victims of a nuclear, biological, or chemical attack. MMRS provides funding to write plans, develop training, purchase equipment or pharmaceuticals, and conduct exercises related to catastrophic incidents, whether caused by terrorists or natural forces.

Mitigation

Activities, laws, or policies that attempt to prevent disasters or reduce potential losses from disasters. Mitigation is often between-disaster activity. Mitigation may be structural (engineered) or nonstructural (behavior changes, zoning laws, land-use restrictions, and the like).

Moral hazard

An increase in the probability of loss caused by the behavior of a holder of insurance. In the realm of the insurance market, those whose homes are insured behave carelessly or dishonestly by failing to take reasonable measures to protect their homes from a known disaster threat because they expect that insurance will cover their losses if a disaster transpires. In the realm of government, this applies when lower-level governments forgo reasonable disaster mitigation measures because their leaders expect post-disaster assistance from upper-level government to cover their losses and so they believe they have realized a savings by not spending money on pre-disaster mitigation.

Multiagency coordination systems (MACS)

Primary function of MACS is to coordinate activities above the field level and to prioritize the incident demands for critical or competing resources, thereby assisting the coordination of the operations in the field. MACS consist of a combination of elements: personnel, procedures, protocols, business practices, and communications integrated into a common system. Emergency operations centers (EOCs) are one of several system elements included within the MACS. Integral elements of MACS are dispatch procedures and protocols, the incident command structure and the coordination and support activities taking place within an activated EOC. Fundamentally, MACS provide support, coordination, and assistance with policy-level decisions to the Incident Command System (ICS) structure managing an incident.

Multi-hazard approach

An approach in which the government would manage all kinds of hazards, rather than maintaining unique and separated capacities to deal with different types of disaster agents. To the extent possible, methods and tools used to address one type of disaster would be applied to a variety of types.

Mutual aid agreements

Written agreements, often formal and matters of law, between agencies or government jurisdictions to assist one another on request by making available personnel, equipment, and expertise in a specified manner. The Emergency Management Assistance Compact (EMAC), which now includes nearly all state governments, facilitates state-to-state mutual aid agreements to be used in emergencies and disasters. Such agreements commonly set forth terms of reimbursement, conditions of liability if responders are hurt or some-how cause harm, and contingent acquisition agreements between providers, vendors, and contractors.[26]

Na-tech disasters

Disasters that occur when natural hazards result in dangerous technological spills or releases.[27] Na-tech events involve a combination of natural and technological interactions. Many na-tech disasters begin from lightning strikes and floods.

National Academies

Composed of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, facilitated by their National Research Council, the National Academies conducts numerous disaster-related research studies for various sponsors, among them federal agencies that contract with them to form panels and conduct studies.[28] The research reports of the National Academies have been known to greatly influence makers of public policy who are struggling to find solutions or policy approaches to the complex problems they must address.

National Disaster Recovery Framework (NDRF)

Promotes management and consultation schemes by which the Federal Emergency Management Agency (FEMA) and its stakeholders can plan disaster recovery long before disasters occur. It is a FEMA-led initiative encouraged at the grassroots level.

National Earthquake Hazards Reduction Program (NEHRP)

Supports federal, state, local, and private research and planning to attenuate earthquake losses in seismic risk

areas. Provides the framework for a national earthquake policy. The Federal Emergency Management Agency (FEMA) was designated the lead agency charged with coordinating that program from 1979 to 2002. However, the National Institute of Standards and Technology (NIST) was assigned lead agency responsibility for the NEHRP in 2003.

National Emergency Management Association (NEMA)

The professional association of and for emergency management directors from all fifty states, eight territories, and the District of Columbia. It provides national leadership and expertise in comprehensive emergency management; serves as a vital emergency management information and assistance resource; and advances continuous improvement in emergency management through strategic partnerships, innovative programs, and collaborative policy positions.

National Fire Academy

Promotes the professional development of the fire and the emergency response community and its allied professionals. The National Fire Academy supports state and local training organizations to fulfill their obligation to the career and volunteer fire and emergency services. The National Fire Academy also develops, delivers, and manages educational and training programs having a national focus that is outside state and local training mission or exceeds state and local capabilities because of cost or audience. The programs are designed to support the U.S. Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) goals to help state and local response agencies prevent; mitigate; prepare for; and respond to local, regional, and national emergencies.[29]

National Flood Insurance Program (NFIP)

A national insurance program operated by the Federal Insurance & Mitigation Administration of FEMA that invites localities to join if they promise to meet federal standards aimed at limiting development in floodplains and promoting flood-proof construction. People living in the communities that joined the NFIP would then be eligible to buy relatively low-cost flood insurance from the federal government. In effect, the federal government would use insurance as a key form of disaster assistance and as a tool of flood mitigation. Flood insurance is only available to Americans through the NFIP.

National Guard

Composed of the Army National Guard, the Air National Guard, and reservists called up to serve. National Guard personnel are commanded in each state by the state's governor unless the Guard is mobilized for federal duty by the president. The U.S. Army and Air National Guard forces are hybrid state-federal militias whose roots reach back before the Revolution. Normally under the control of state governors, the National Guard is almost entirely funded and equipped by the federal government, and the troops are trained to the same standard as active-duty personnel. National Guard troops can perform law enforcement functions under a state's laws but cannot enforce criminal law when they are federalized—that is when they are under the direct control of the president.

National Incident Management System (NIMS)

The elaborate tactical arm of the National Response Framework (NRF), designed to help federal, state, and local governments address domestic incidents, whether acts of terrorism or disasters stemming from natural or other human causes. All federal agencies were required to adopt NIMS and state and local governments were required to use it as a condition of federal assistance. The NIMS incorporated many existing emergency management "best practices" into a comprehensive national approach to domestic incident management, applicable at all jurisdictional levels and across all responder occupational fields. Its purpose was to help responders at all jurisdictional levels and across all disciplines to work together more effectively and efficiently. A core component of the NIMS was the Incident Command System (ICS). The NIMS has a core set of doctrines, principles, terminology, and organizational processes. It is supposed to be based on a balance between flexibility and standardization. It seeks a consistent, nationwide template for incident management.

National planning scenarios

Fifteen "planning scenarios" developed by the U.S. Department of Homeland Security (DHS), intended to be used in evaluating the ability of a jurisdiction to manage a major disaster. They encompass the range of "plausible" events, most of them stemming from terror attacks involving weapons of mass destruction, that are assumed to pose the greatest risk to the nation.

National preparedness

> A set of goals established by the secretary of homeland security under Homeland Security Presidential Directive-8 (HSPD-8), primarily focused on preparedness for terrorism-related events, especially the training and equipping of emergency response agencies.

National Response Framework (NRF)

> A comprehensive all-hazards approach and master plan intended to strengthen and improve the ability of the United States to manage domestic incidents. In 2008 the federal government officially replaced the National Response Plan (NRP), with changes, as the NRF. The NRF provides a template for federal, state, and local governmental cooperation and coordination in disaster response. In December 2013 the second edition of the NRF was launched. It is based on the version released in 2008. The new NRF incorporates a focus on whole community and core capabilities. For example, the framework now describes the important roles of individuals, families, and households in response activities. Also, the frameworks are intended to be strategic documents, with tactical planning and concept of operations content reserved for the new Federal Interagency Operational Plans (FIOPs). As a result, the revised NRF is shorter and more strategic than its predecessor.[30]

National Response Plan (NRP)

> The National Commission on Terrorist Attacks Upon the United States, commonly referred to as the 9/11 Commission, called on the George W. Bush administration to prepare a comprehensive national response plan that would replace the Federal Response Plan (FRP) and give greater attention to terrorism prevention, preparedness, and consequence management. The NRP, launched in 2003, integrally included state and local government and non-profit or for profit corporation stakeholders. It retained the FRP template of emergency support functions (ESFs) that called on a variety of federal agencies and their resources when needed. Under the NRP, primary responsibility for managing domestic crises was now to rest with the secretary of homeland security. The plan contained language strongly suggesting that the federal government would in the future assume more responsibility for directly managing some crises. The NRP, in place but lacking complete mastery by many state and local emergency managers, was carried out with great criticism and controversy in the inter-governmental response to Hurricane Katrina in 2005. The NRP was replaced by the National Response Framework (NRF) in 2008.

National Science Foundation (NSF)

> Is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense.… " With a fiscal year 2014 annual budget of $7.2 billion, it is the funding source for approximately 21 percent of all federally supported basic research conducted by U.S. colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing. A fraction of NSF awards support research pertinent in disaster research and engineering.[31]

National Special Security Events (NSSEs)

> An "incident of national significance" category. NSSEs are designated by the president and/or the secretary of Department of Homeland (DHS) and usually encompass any high-profile, large-scale event believed vulnerable to terror attack. The U.S. Secret Service, part of the DHS since 2003, is the lead agency in preparing for and responding to NSSEs. The Secret Service is authorized to participate "in the planning, coordination and implementation of security operations at special events of national significance." When an event is designated by the secretary of DHS an NSSE, the Secret Service assumes its mandated role as the lead agency for the design and implementation of the operational security plan. The Secret Service has developed a core strategy to carry out its security operations, which relies heavily on its established partnerships with law enforcement and public safety officials at the local, state and federal levels (often including the Federal Emergency Management Agency [FEMA]). The goal of the cooperating agencies is to provide a safe and secure environment for Secret Service protectees, other dignitaries, the event participants, and the general public. There is a tremendous amount of advance planning and coordination in preparation for NSSEs, particularly in regard to venue and motorcade route security, communications, credentialing and training.[32]

National Terrorism Advisory System (NTAS)

> Replaced the controversial color-coded Homeland Security Advisory System (HSAS) in April 2011. NTAS

alerts now are reduced to two categories: (1) imminent threat alert, which warns of a credible, specific, and impending terrorist threat against the United States and (2) elevated threat alert, which warns of a credible terrorist threat against the United States. The secretary of the U.S. Department of Homeland Security (DHS) decides, based on available information and in coordination with other federal entities, whether an NTAS alert should be issued. NTAS has a provision for declaring the end of a posted alert.

National Volunteer Organizations Active in Disaster (National VOAD)

A nonprofit, nonpartisan membership organization that serves as a forum in which organizations share knowledge and resources throughout the disaster cycle—preparation, response, recovery and mitigation—in order to help communities prepare for and recover from disasters and to avoid volunteer organization duplication of effort. The National VOAD coalition includes over fifty national organizations, some faith-based, some community-based, and others secular nongovernmental organizations (NGOs). There are also fifty-five State/Territory VOAD groups, which represent Local/Regional VOAD groups and hundreds of other member organizations throughout the country. The group includes the American Red Cross and the Salvation Army.[33]

National Weather Service (NWS)

A part of the National Oceanic and Atmospheric Administration (NOAA) within the U.S. Department of Commerce, its mission is to provide weather, water, and climate data; forecasts; and warnings for the protection of life and property and enhancement of the national economy. Has some 5,000 employees in 122 weather forecast offices, 13 river forecast centers, 9 national centers, and other support offices. NWS provides a national infrastructure to gather and process data worldwide.[34]

Need-based, means-tested model

Explains declaration decision making in terms of rules and proven qualification, often in the interest of federal deficit control. The need-based, means-tested model applies in emergency management if local government pursues sustainability in its emergency management. Its disaster response and recovery funding is largely self-generated and it has no designs on exploiting national taxpayer money beyond the minimum needed to reestablish itself after a disaster or emergency.

NEHRP Reauthorization Act of 2003

This measure authorizes funding for the NEHRP program from fiscal year 2005 through fiscal year 2009. In addition, it made a number of reforms to the program, including designating National Institute of Standards and Technology (NIST) as the program's lead agency. It also established an Interagency Coordinating Committee and an Advisory Committee on Earthquake Hazards Reduction to improve the program's coordination and implementation.[35]

Network theory

A field of computer science and network sciences and a part of graph theory (the study of graphs and mathematical structures). It is often deployed to examine the method of characterizing and modeling complex networks. Many complex networks share some common features. Network theory is also applied to logistic networks, gene regularity networks, metabolic networks, the World Wide Web, ecological networks, epistemological networks, and social networks. It is applied in multiple disciplines, including biology, computer science, business, economics, particle physics, operations research, and, most commonly, in sociology.[36]

New Federalism

A component of President Reagan'spolitical ideology. It maintained that states too often relied on the federal government for help in matters they could easily address on their own. Reagan insisted that the federal government needed to be less intrusive in matters traditionally left to state and local government. A catchword of the Reagan era was "devolution" of certain federal responsibilities back to the states and localities.

New normal

A new view of normalcy in the national psyche and in the domain of disaster policy and homeland security brought about by certain disasters, often catastrophes, that stress the nation's disaster management system and force massive policy reforms.[37]

NOAA National Severe Storms Laboratory (NSSL)

Part of the scientific laboratory system of the National Oceanic and Atmospheric Administration (NOAA).

NSSL research spans weather radar, tornadoes, flash floods, lightning, damaging winds, hail, and winter weather. NSSL is located in the National Weather Center (NWC) in Norman, Oklahoma. The NWC houses a University of Oklahoma complex plus various NOAA and state organizations that work together to improve understanding of weather.[38]

Nonprofit voluntary organizations

Organizations composed largely, but not exclusively, of volunteers. Faith-based or not, they are often part of both the official and unofficial response to a disaster or emergency, and all enjoy a nontaxable federal income tax status, as well as exemption from various state and local income and property taxes. Those who make cash and in-kind donations to these organizations often enjoy a federal income tax deduction that effectively subsidizes their contributions. Some of these organizations operate internationally as well as inside the United States.

Nonstructural hazard mitigation

The use of "soft" engineering and other approaches, such as zoning laws, building codes, land-use regulations, and education of the public, to buffer wetlands against flooding, protect coastlines and barrier islands from erosion and development, encourage the use of landscaping that protects structures from flooding or wildfires, and otherwise protect hazard-prone, high-risk areas.

Nonterrorism missions

The original missions of the Federal Emergency Management Agency (FEMA) and other agencies that became part of the U.S. Department of Homeland Security (DHS) in 2003. These agencies, including FEMA, are still struggling to fulfill both their terrorism-related duties and their original nonterrorism missions.

Occupations

Categories of jobs, livelihoods, or vocations. People in certain occupations may be represented by labor unions or trade unions, but the occupations themselves may not necessarily conform to the definition of a "profession."

Office of Peacekeeping and Humanitarian Affairs

Has the job of leading or coordinating the U.S. military response to disasters beyond U.S. borders and resides in the U.S. Department of Defense (DOD).

Office of the United Nations High Commissioner for Refugees (UNHCR)

Protects and aids refugees and internally displaced persons (IDPs).[39] The most basic responsibility of the UNHCR is to guarantee refugees' fundamental rights, including their ability to seek asylum. It strives to make sure that no person is involuntarily returned to a country if doing so would subject that person to persecution or otherwise put his or her life in danger.[40] The UNHCR facilitates the necessary movement of masses of people, often refugees, during emergencies. It promotes education, health, and shelter programs and is expected to provide for the well-being of refugees. It manages the repatriation of people who freely wish to return to their home country and resettles those refugees seeking asylum to nations willing to accept them.[41]

Office of U.S. Foreign Disaster Assistance (OFDA)

Facilitates and coordinates U.S. emergency response overseas. Part of the U.S. Agency for International Development (USAID), OFDA is divided into four units. OFDA is authorized to respond to all natural disasters (earthquakes, volcanic eruptions, cyclones, floods, droughts, fires, pest infestation, disease outbreaks) and man-made disasters (civil conflicts, acts of terrorism, industrial accidents). Besides furnishing immediate assistance, it funds mitigation activities to lessen the effects of recurring disasters. OFDA also makes available guidance and training intended to help those in other nations develop their own disaster management and response capacity.

Oklahoma City (1995) terrorist bomb attack

On the morning of April 19, 1995, an ex–U.S. Army soldier and security guard named Timothy McVeigh parked a rented truck in front of the Alfred P. Murrah Federal Building in downtown Oklahoma City. It contained a homemade bomb. At precisely 9:02 a.m., the bomb exploded. Within moments, the surrounding area looked like a war zone. A third of the building had been reduced to rubble, with many floors flattened like pancakes. Dozens of cars were incinerated and more than 300 nearby buildings were damaged or destroyed. The human toll was still more devastating: 168 people lost, including 19 children,

with several hundred more injured. It was the worst act of home-grown terrorism in the nation's history.[42]

Organizational process model

Model developed by political scientist Graham Allison, which posits that presidential decisions are essentially a routine administrative determination handled by a stovepipe -connected assortment of lower-level government officials. In this model the president or executive has either largely delegated decision authority to someone else or rubber-stamps the official recommendation of his or her functionaries.

Other Needs Assistance (FEMA)

Provides grants for uninsured, disaster-related necessary expenses and serious needs. Items covered include funeral and burial costs; repair, cleaning, or replacement of clothing and household items (room furnishings, appliances); specialized tools or protective clothing and equipment required for one's job; necessary educational materials (computers, school books, supplies); cleanup items (wet/dry vacuum, air purifier, dehumidifier), fuel for primary heat source (heating oil, gas; repairing or replacing vehicles damaged by the disaster, or providing for public transportation or other transportation costs; moving and storage expenses related to the disaster (including storage or the return of property to a pre-disaster home); other necessary expenses or serious needs (e.g., towing or setup or connecting essential utilities for a housing unit not provided by the Federal Emergency Management Agency [FEMA]). Unlike the FEMA Public Assistance Program, there are no set thresholds that counties must meet to be deemed eligible for the Individuals and Households Program (IHP).

Overlapping-authority model

A model of intergovernmental relations in which substantial areas of governmental operations involve national, state, and local governments simultaneously. Areas of autonomy or single-jurisdiction independence and full discretion are relatively small. Power and influence for any one jurisdiction is substantially limited, and authority patterns involve heavy bargaining.

Performance Partnerships

A type of negotiated agreement, which for many years the Federal Emergency Management Agency (FEMA) used in its administrative transactions with state emergency management organizations, and through these state organizations, local emergency management organizations. Performance partnerships were based on collaborative schemes through which various federal funds were disbursed by FEMA to state and local emergency management agencies under prearranged levels and terms of agency performance.

Posse Comitatus Act of 1878

Established clear boundaries regarding the role the military could play in civil law enforcement. The aim was to ensure that the military would not assume police powers exempted from civilian control. Passed during Reconstruction following the Civil War in order to prohibit the military from enforcing civilian laws, it sought to codify the long-standing aversion of Americans to a standing army that could become an instrument of governmental tyranny.

Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006

PKEMRA gives the Federal Emergency Management Agency (FEMA) more organizational autonomy than it has had since becoming part of the U.S. Department of Homeland Security (DHS). Like the U.S. Coast Guard and the U.S. Secret Service, FEMA is now classified as a distinct entity within DHS. In addition, the agency is no longer subject to the DHS secretary's broad reorganization authority under the 2002 Homeland Security Act. The act authorizes the FEMA administrator, as of March 31, 2007, to provide emergency-management-related recommendations directly to Congress after informing the secretary. The act also explicitly prohibits substantial or significant reductions, by the secretary, of the authorities, responsibilities, or functions of FEMA, or FEMA capability to perform them. Furthermore, the PKEMRA prohibits most transfers of FEMA assets, functions, or missions to other parts of DHS. PKEMRA has additional important provisions, which cumulatively significantly enhance the powers and duties of FEMA and its administrator.

Preliminary Damage Assessments (PDAs)

Teams of assessors conduct an initial assessment to estimate the degree of damage and potential costs resulting from a disaster. The assessment is broken down into categories (such as the number of homes damaged or destroyed and the number of public facilities damaged or destroyed) that correspond to the broad categories of disaster relief and assistance that the Federal Emergency Management Agency (FEMA)

provides through the individual assistance or public assistance programs. The information a PDA generates is used by FEMA and the president to determine whether a declaration will be issued and, if one is issued, whether individual and public assistance programs will be provided to the areas (generally, counties, parishes, and independent cities) included in the declaration.

Preparedness

Activities, laws, or policies designed to increase readiness or improve capabilities for disaster response and recovery operations. A pre-disaster activity aimed at helping the public survive and cope with the effects of possible future disasters.

Primary waves (P waves)

Emanate from an epicenter and are the initial indicators an earthquake has been triggered. Though these waves are almost imperceptible to humans, sensor detection of primary waves may be used to calculate the epicenter of a seismic event and its magnitude. They are capable of traveling through solids, liquids (including oceans), and even the earth's core.[43]

Principal-agent theory

Assumes that managers (the principals) function in an environment in which they cannot observe whether their agents (subordinate workers and contractors) in fact carried out the instructions they issued. The theory, from economics and used extensively in performance-based government contracting studies, also assumes that agents hide information from principals and may use the information to act in ways contrary to what principals intended.

Private, for-profit contractors

For-profit contractors, often corporations and other business entities, many of whom are retained by government to perform work, produce a product, accomplish a task, provide a service, build or repair a structure, and the like. They are used by the federal government, as well as by subnational governments, as part of the official response to a disaster and to carry out certain tasks or to produce certain products for short- or long-term disaster recovery and for disaster mitigation. Although government contractors usually have to go through a public bidding process, sometimes the slowness of that process has prompted the issuance of "no-bid" contracts, which have often become subjects of political controversy.

Profession

A vocation that is esoteric, complex, and discretionary and embodies self-directing work. It requires theoretical and applied knowledge, skill, and judgment that others may not possess or cannot easily comprehend. Theory-grounded knowledge, acquired through higher education, is the basis of most professions.

Professional body

Sets examinations of competence for a profession, acts as licensing authority for practitioners of the profession, and enforces adherence to an ethical code of conduct adopted by the professional association it serves. Most professions are regulated by respective professional bodies or organizations of some type.

Project Impact

In October 1997 the Clinton-Witt Federal Emergency Management Agency (FEMA) launched an effort that sought to build disaster-resistant communities through public-private partnerships. It included a national public awareness campaign, the designation of pilot communities, and an outreach effort to community and business leaders. Under Project Impact, FEMA encouraged communities to assess the risks they faced, identify their vulnerabilities, and take steps to prevent disasters.

Public Assistance Program (FEMA)

Provides grants to state and local governments and certain nonprofit entities to assist them with the response to and recovery from disasters. Specifically, the program provides assistance for debris removal, emergency protective measures, and permanent restoration of infrastructure. One of two major post-disaster assistance programs of the Federal Emergency Management Agency (FEMA).

Public works

A constructed internal improvement that augments a government's economic infrastructure. The term is often used interchangeably with *municipal infrastructure* or *urban infrastructure.* Highways, bridges, water ports, seaports, railways, mass transit systems, water supply and sewage treatment systems, government office buildings, electricity and natural gas distribution systems, communications systems, public stadiums, and

other physical structures, often funded through capital borrowing, are examples of public works.

Rational actor model

Emanating from rational choice theory, the model has been widely applied in international relations (realist theory) and in organizational theory. It posits in the ideal that a person (sometimes assumed to be the president or a leader of some type) makes decisions largely on his or her own, with the information they have available or which others have provided. It assumes the decision maker has rationally ordered preferences and motivations, as a unitary or single actor. It holds that the decision maker knows and understands the problem requiring a decision and that he or she has considered all reasonable alternatives or courses of action before making the decision. Under assumptions of the model, the president is assumed to be making rational decisions on behalf of the entire national government and that these decisions are definitive at the time they are made. It also assumes that individual rationality inheres in that decision making. There are many criticisms and critics of the rational actor model, and there are alternative models and theories used to understand how leaders make decisions. Scholars who analyze the decisions of leaders using this model find it helpful in that factors and forces judged to be extraneous or irrelevant are ignored as a matter of simplification.

Recovery

Begins as a disaster is ending or at the close of the disaster response phase. Involving activities, laws, or policies that return disaster-affected governments, communities, and people to their pre-disaster conditions, it may take months or years to complete and is usually the most expensive phase in the disaster cycle.

Recovery assistance

Government-furnished disaster assistance provided to individuals, households, as well as to state and local government. May address long- and short-term post-disaster recovery needs. May include Federal Emergency Management Agency (FEMA) public assistance or individual assistance but may include recovery aid from a variety of other federal departments and agencies besides FEMA.

Regional administrators (FEMA)

Presidentially appointed, subject to U.S. Senate confirmation, regional administrators (directors) contribute mightily to emergency management work in their regions, particularly when they work well with federal coordinating officers (FCOs) assigned by the president to the disaster or emergency. It is also important that they maintain good working relationships with governors and state emergency management directors in their respective region.

Reinventing government movement

An extension of the New Public Management movement of the 1990s, a movement that offered low-level administrators more power and, informed by modern management consultants, concluded that organizations need to rediscover the importance of customer satisfaction. It also advocated broader governance, under which public and private sector organizations might work together under more cooperative or blended arrangements. The movement was embraced by the Clinton administration as a tool for improving federal public management.

Response

Begins when a disaster event occurs or is imminent. It is also activities, laws, or policies applied in the immediate aftermath of a disaster to protect life and property, prevent secondary disaster effects, and reconstitute government operation.

Restitution statutes

Based on the principle that the wrongdoer must be punished. These statutes allow survivors and the families of decedents to bring suit against wrongdoers in court.

Risk (in the context of hazards)

Is the likely consequence of a hazard, and so is "the combination of the probability of a hazardous event and its negative consequences."[44] To some degree, risk can be measured in objective, probabilistic, mathematical terms. Risk analysis is at the core of hazard identification and hazard vulnerability assessment. The study of risk is also a central part of insurance underwriting.

Samaritan's dilemma

When providing assistance after a disaster reduces the economic incentives of potential victims to invest in protective measures, such as buying appropriate insurance and taking reasonable mitigation measures, prior

to a disaster. If the expectation of disaster assistance reduces the demand for insurance, the political pressure on the government to provide assistance after a disaster is reinforced or amplified."[45]

Sandy Recovery Improvement Act of 2013

Destructive Superstorm Sandy in November 2013 generated major disaster declarations for thirteen Mid-Atlantic and Northeast states and property losses rivaling those of Hurricane Katrina in 2005. Congress devoted $50.7 billion to Sandy relief and recovery and approved a nearly $10 billion increase in national flood insurance borrowing authority to help cover National Flood Insurance Program (NFIP) claims from the disaster and to recapitalize the NFIP fund. The law revised and streamlined many provisions of the Federal Emergency Management Agency (FEMA) Public Assistance and Individual and Households programs (IHP). It also authorizes the chief executive of a tribal government to directly request disaster or emergency declarations from the president, much as a governor can do for a state.

Sarin nerve gas

"Sarin is a nerve agent. Once inside a body, nerve agents affect the signaling mechanism that nerve cells use to communicate with one another. Sarin is a cholinesterase inhibitor—it gums up the cholinesterase enzyme, which nerve cells use to clear themselves of acetylcholine. When a nerve cell needs to send a message to another nerve cell (for example, to cause a muscle to contract), it sends the message with the acetylcholine. Without cholinesterase to clear the acetylcholine, muscles start to contract uncontrollably—this eventually causes death by suffocation since the diaphragm is a muscle. It acts in five to 12 hours."[46]

Secondary waves (S waves)

Seismic force that moves through the earth at about half the speed of primary waves. Waves move at right angles to direction of travel much like wave travel along a flexed rope held between two people. S waves cannot travel through water. They are responsible for much of the damage caused by an earthquake.[47]

Secular nonprofit voluntary relief organization

A nongovernmental organization (NGO) is an organization that is not part of a government and was not founded by states. NGOs are therefore typically independent of governments. Although the definition can technically include for-profit corporations, the term is generally restricted to social, cultural, legal, and environmental advocacy groups having goals that are primarily noncommercial, including providing disaster relief and assisting disaster victims. NGOs are usually nonprofit organizations that gain at least a portion of their funding from private sources. Nongovernmental organizations (NGOs) vary in a great many ways. Secular nonprofit voluntary organizations are those not predicated on an organized religion.

Securitization

Involves extension of national security concerns into other domains of public policy, including emergency management. Securitization also involves development of new types of security-related research and technologies. It also connotes a trend toward increased security classification of many documents that were previously open and publicly available.

Security classification

A means of government protection of sensitive information from unauthorized disclosure. The federal government maintains a tiered system of security classification, and individuals may be granted security clearances following background checks, their taking of legal oaths that they will not divulge secret information, and other requirements, including drug testing. Many aspects of federal emergency management are today subject to security restriction. This means that only those with appropriate security clearances may read, use, act on, or alter this information, thus narrowing the pool of people responsible for conducting work or duties called for in the documents.

Seismic building codes

Intended to protect people inside or near buildings by preventing collapse and allowing for safe evacuation. Structures built according to code are earthquake resistant, not earthquake proof. They should be able to resist minor earthquakes undamaged, moderate earthquakes without significant structural damage, and severe earthquakes without collapse.

Seismic mapping

Serves as the basis for seismic provisions used in building codes and influences how and where new construction or seismic retrofitting takes place every year.

Self-help

A government policy of encouraging individual responsibility for disaster preparedness and, conversely, less public dependence on government for the same purpose.

September 11th Victim Compensation Fund (VCF)

The September 11th VCF typically addressed economic losses, and in some respects personal losses, incurred from the disaster. This went further than merely addressing post-disaster recovery needs. Money awards went to injured survivors and to families or relatives of those who perished in the disaster. The program was established by Congress in law, implemented by a Special Master and his staff, and organizationally linked to the U.S. Department of Justice. The VCF was, first and foremost, a specific form of relief for victims of the terrorist attacks on the World Trade Center in New York City, the Pentagon in Virginia, and United Flight 93 that crashed in Pennsylvania on the morning of September 11, 2001.

Short-term recovery

May overlap some of the disaster response phase. It routinely includes, "search and rescue, damage assessments, public information, temporary housing, utility restoration, and debris clearance."[48]

Situational awareness

The provision of timely and accurate information during an incident. It is critical in incident management and effective response operations. Without it, decisions will not be informed by what is going on at the disaster site and actions will be inefficient and ineffective. Situational awareness requires continuous monitoring, verification and integration of key information needed to assess and respond effectively to disasters or emergencies, as well as to threats or potential threats.

Social catastrophe

Catastrophic disaster in which forces of structural racism and social inequality cause the poor, people of color, and those in marginalized groups to suffer disproportionately.

Social constructivism

Explains problems and policy issues by focusing on people's behavior and beliefs rather than on the putative "conditions" that are the object of those actions. Social constructivists maintain that it is the actions and persuasiveness of people, perhaps amplified through mass communications, which define what a phenomenon is or is not. Maintains that all cognitive functions originate in and must therefore be explained as products of social interactions and that learning is not simply the assimilation and accommodation of new knowledge by learners but is the process by which learners are integrated into a knowledge community. Language and culture play essential roles both in human intellectual development and in how humans perceive the world. Humans' linguistic abilities enable them to overcome the natural limitations of their perceptual field by imposing culturally defined sense and meaning on the world. Language and culture are the frameworks through which humans experience, communicate, and understand reality.[49]

Social media

Internet communications systems, software, and platforms that facilitate social networking including blogging, microblogging, photo sharing, video sharing, video streaming, wiki sourcing, virtual worlds, online radio, and aggregators (collective real-time monitoring tools of selected types of user exchanges).[50]

Special Master

Person, usually an attorney, appointed to carry out judicial or legal orders. They are empowered to direct and implement compensation funds and are usually appointed by a judge. As used in the September 11th Victim Compensation Fund (VCF), family members or representatives of the lost individuals could meet face-to-face with one individual, the Special Master, representing the entire government to express their concerns or plead for additional money awards. The Special Master was authorized to devise the rules for compensation, process individual claims, make awards in widely varying amounts, and hear appeals and grievances—all with little or no public accountability. Masters are routinely expected to engage in mediation and negotiation.

Staffing for Adequate Fire and Emergency Response (SAFER)

A federal grant program that took effect in late 2003 and that advances local disaster preparedness. SAFER grants are crucial to helping fire departments hire sufficient firefighters to meet safe staffing levels.

Stafford Disaster Relief and Emergency Assistance Act of 1988

Reauthorizes presidential power to issue major disaster and emergency declarations, allows broader eligibility criteria, and specifies the type of assistance the president may authorize. Refines the definition of *emergency*

clearly affording the president a great deal of latitude in determining what is or is not an emergency. The Stafford Act came to demarcate the beginning of modern-era national disaster management.

Stakeholders

Persons, individually or in a group, who have, or think they have, something to gain or lose. In emergency management, they are people and organized interests of people affected by the decisions of policymakers and emergency managers. Some stakeholders unselfishly seek benefits or protections for the people or groups whose interests they champion.

State adjutant general

A military officer in charge of the National Guard in one of the U.S. states.

State Homeland Security Program (SHSP)

A U.S. Department of Homeland Security (DHS) program that provides funds to state and local governments for help in planning, equipping, and training, as well as exercise activities intended to improve their ability to prepare for, prevent, and respond to terrorist attacks and other disasters. The program also supports the implementation of state homeland security strategies and key elements of the national preparedness architecture, including the National Preparedness Goal, the National Incident Management System (NIMS), and the National Response Framework (NRF).

Structural hazard mitigation

Efforts to contain a hazard, such as building dams and other flood abatement works and coastal infrastructure, or strengthening buildings and other structures to withstand disaster stresses. Often entails use of "hard" engineered structures.

Tacit knowledge

Vague and ambiguous knowledge that depends on sharing expectations and values through social relationships. Neither easily conveyed nor learned from the outside, this form of knowledge is often acquired through observation, internships, apprenticeships, mentoring, or on-the-job socialization experiences.

Target capabilities list

Among the National Preparedness Goals aimed at establishing "capability-based planning" for various types of terrorist attack and a small subset of nonterror disasters and emergencies is a requirement that major municipalities prepare a target capabilities list. Based on the targets municipal officials believe are vulnerable, they then need to demonstrate to the U.S. Department of Homeland Security (DHS) how their current capabilities would enable them to save lives, protect property, and revive their local economies.

Target capability

A term that refers to the ability of a government jurisdiction to prevent, or respond to, a range of different types of terrorist attacks on specific likely targets within a jurisdiction.

Technocrat

Official of a public bureaucracy who possesses special knowledge and expertise most average citizens do not have and who works under norms of objectivity and political neutrality.

Territorial sovereignty

The internationally recognized principle that a government should be the ultimate authority within the boundaries of its jurisdiction and should be free of unwanted external interference. A principle embedded in the original Charter of the United Nations that promises each member nation that the UN will respect each member state's national territorial sovereignty.

Terrorism consequence management

All government activities undertaken to address the effects or aftermath of a terrorist-caused disaster or emergency. These include not only emergency responder functions but also law enforcement, intelligence work, and the like.

Terrorism Risk Insurance Act (TRIA)

Passed originally in 2002, the law has been amended and reenacted several times since then and is still in effect. It stimulated business investment that had slowed to a trickle after the events of 9/11, owing to terrorism fears by major lenders, including major banks. TRIA backs up insurance companies and guarantees that certain terrorism-related claims will be paid. Under the terms of the act, the federal government has agreed to backstop private insurers who fear they will be swamped and bankrupted by

claims filed by those who suffer the consequences of a future large-scale terror attack in the United States.

Tightly coupled interdependence [51]

A concept employed by Charles Perrow in his seminal book *Normal Accidents*. It is a theory of organization that holds that high-risk systems of many modern complex and technology-dependent organizations are vulnerable to failure, sometimes with catastrophic consequences, because the sociotechnical operations upon which they function manifest tight interdependencies or linkages. Owing to their complexity and interlocking operations, they tend to fail quickly, unexpectedly, often with little or no warning (or misread warnings), and they defy correction by operators, who themselves sometimes compound rather than resolve problems. Owing to tight coupling and interdependence of operations, failures or errors, whether human or technological tend to produce effects and consequences that spread rapidly, uncontrollably, and often in unanticipated ways.

Tolerated disaster vulnerabilities

Unintentionally overlooked, discounted, or deliberately ignored or discounted hazard and disaster risk vulnerabilities, which are thus tolerated. Human settlement patterns, commercial and government building decisions and infrastructure construction, and known geophysical and meteorological phenomena often combine to create a realm of tolerated disaster vulnerabilities.

Top-down command and control system

A form of command and control under which federal officials get to assume top-down leadership positions, and state and local authorities are expected to submit to their direction.

Turndown

A turndown is the action authorized by the president and signed by the director of the Federal Emergency Management Agency (FEMA) that denies a governor's request for a major disaster or emergency declaration.

Unemployment assistance (FEMA)

A program of disaster assistance administered by states as agents of the federal government. It provides financial help to individuals whose employment or self-employment has been lost or interrupted as a direct result of a major disaster declared by the president.

United Nations Children's Fund(UNICEF)

Created after World War II to alleviate the suffering of European children, UNICEF is able to respond rapidly to natural or man-made disasters from its offices in nations where it already has permission to operate. It works to help and reduce the vulnerability of new mothers and families with small children. Children and women caring for small children are often weaker members of their societies and are less capable of rebounding in disasters than others. During natural disasters or complex humanitarian emergencies, UNICEF works with other relief agencies to restore basic services, such as food distribution, water, and sanitation. UNICEF officials also try to make available basic medical services and immunizations. UNICEF is empowered to advocate children's rights worldwide.

United Nations Development Programme (UNDP)

Has duties in disaster mitigation, prevention, preparedness, recovery, and reconstruction. The UNDP operating norm is that disaster vulnerability remains fundamentally connected to weak or absent infrastructures, the failure or inadequacy of environmental policies, and human settlement in high-hazard zones. As a development agency it strongly seeks to advance disaster mitigation and sustainability. UNDP early recovery team works with the response partners, so that strong links are established and maintained between response and recovery through to mitigation and preparedness.

United Nations Disaster Assessment and Coordination (UNDAC) team

Help to harmonize the disaster relief assistance made available by many of the UN organizations.

United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

Headed by an Undersecretary General, the Emergency Relief Coordinator harmonizes the work of the various UN relief organizations in humanitarian emergency responses. She or he does so through an Inter-Agency Standing Committee, itself composed of both UN and non-UN humanitarian leaders.[52] OCHA seeks to build consensus and share best practices among all UN partners, and it identifies issues arising from disaster management and response that need to be addressed. OCHA also amasses information from its Disaster Response System, a unit that monitors ongoing disasters, conducts post-disaster assessments and evaluations, and manages a bank of data made available to the international community of responders.

OCHA operates to advance respect for human rights. It is also in charge of a Central Emergency Revolving Fund, which operates as a cash reserve available to humanitarian agencies with cash-flow problems. OCHA is able to loan money, but reimbursement is expected.

Universal Task List

Developed by the U.S. Department of Homeland Security (DHS) to describe what tasks need to be performed, who needs to perform them, and how to perform them in the event of terrorist attack disaster or natural or human-caused (nonterror) disaster. The Universal Task List contains some 1,600 different tasks, and local government officials are expected to maintain a correct list of all the resources needed and available to fulfill each task.

Urban Area Security Initiative (UASI)

Authorized by federal law in 2005 to facilitate rapid response in the nation's fifty largest cities to attacks from weapons of mass destruction. UASI addresses planning, operations, equipment acquisition, training, and exercise needs and provides financial assistance based on a risk-and-needs approach. Funding allotments are determined by a formula that combines threat estimates, critical assets within the urban area, and population density.

U.S. Agency for International Development (USAID)

For many years an independent agency, it is now again part of the U.S. Department of State. The agency is officially obligated to further U.S. foreign policy interests in expanding democracy and free markets while improving the lives of the citizens in developing countries. USAID extends assistance to countries recovering from disasters. The agency addresses issue areas as broad as economic growth, agriculture, trade, global health, democracy, conflict prevention, and humanitarian assistance. It provides assistance in sub-Saharan Africa, Asia, the Near East, Latin America, the Caribbean, and Europe/Eurasia.

U.S. Army Corps of Engineers (USACE)

Formed in 1802, the USACE has built, owned, maintained, and managed an enormous amount and variety of public infrastructure inside the United States. The corps' role in responding to natural disasters emerged in matters of flood control after the Civil War. In the twentieth century, the corps became the lead federal flood control agency and significantly expanded its civil works activities, becoming a major provider of hydroelectric energy and water impoundment recreation areas.

U.S. Coast Guard

A military organization that since2003 has been part of the U.S. Department of Homeland Security (DHS). It has a long history of involvement in maritime safety and disaster response. For many years the U.S. Coast Guard has behaved as a federal emergency management organization but one with an on-the-water focus. The U.S. Coast Guard has been highly active in matters of port and maritime disaster mitigation, planning, response, and recovery as well as drug interdiction, boater safety, facilitation of marine navigation, port security, border patrol, fisheries regulation, and environmental protection along coasts and waterways.

U.S. Fire Administration (USFA)

Provides training to fire service personnel on a national level. By augmenting existing state and local fire service training programs, it works to improve and maintain high fire company standards of capacity and performance across the nation. The USFA helps develop the technology that fire services must obtain to help them promote fire prevention and to improve response. The USFA assists state and local groups in collecting and interpreting data on fires in their respective areas.

U.S. Northern Command (USNORTHCOM)

Refers to the North American Command, which provides command and control of U.S. Department of Defense (DOD) homeland defense efforts and coordinates the defense support the military provides to civil authorities. The USNORTHCOM mission is to help prevent terrorist attacks on the homeland by militarily defeating attacks by foreigners if possible, protecting U.S. borders or airspace from encroachment or penetration by attackers, and aiding in the response to an incident involving a weapon of mass destruction inside the United States.

U.S. Small Business Administration (SBA)

Within the U.S. Department of Commerce. Offers three types of federally subsidized disaster loans to help qualified homeowners and businesses—home disaster loans, business physical disaster loans, and economic injury loans. A major source of funding help for those who do not qualify for federal disaster assistance

because their incomes are too high under Federal Emergency Management Agency (FEMA) means-tested relief programs.

Vertical fragmentation

Occurs in disaster management when officials of these levels of government—federal, state, and local—fail to coordinate their responsibilities, act too independently of one another, duplicate their efforts, or work at cross-purposes, or when one level of government fails to carry out its obligations in an intergovernmentally organized system.

Volition

Refers to a conscious choice or decision made by an individual or group. In the realm of disaster risk, individuals use volition when they are aware of the degree of risk or the extent of vulnerability and intentionally decide to assume that risk or accept that vulnerability in some action they take.

Volkmer Amendment

Contained within the Hazard Mitigation and Relocation Assistance Act of 1993, it amended some parts of the 1988 Stafford Act. It increased Federal Emergency Management Agency (FEMA) funds dedicated to community assistance disaster funding for relocation or hazard mitigation activities from a subsidy of 10 percent (in the original Stafford Act of 1988) to 15 percent. Once FEMA has paid out a sum total of federal disaster relief to a state under a presidential declaration of major disaster, the state is then entitled to receive additional federal money equivalent to 15 percent of the total funds the state received from the federal government under the declaration. The state may use this additional federal money to subsidize state and FEMA-preapproved disaster mitigation projects. The Volkmer Amendment also increased from 50 percent to 75 percent the federal share of the cost of specific pre-disaster mitigation activities or projects. This increase greatly benefited states and localities that put forward worthy mitigation projects and that were willing to come up with the remaining matching costs.

Voluntary agencies (VOLAGs)

Defined as voluntary nonprofit organizations, community service groups, and religious organizations that provide assistance in the aftermath of a disaster or emergency.

Voluntary risk

A risk accepted on one's own initiative or from one's own free will. The reverse, involuntary risk implies that a risk is imposed upon someone without that person's agreement, permission, or perhaps even knowledge.

War on terror

A policy authorized by U.S. Congress under the Authorization for Use of Military Force against Terrorists resolution enacted into law following the 9/11 attacks on the United States. Both the phrase *war on terror* and the policies it denotes have been a source of ongoing controversy, as critics argue they have been used to justify unilateral preemptive war, perpetual war, human rights abuses, and other violations of international law. The Obama administration seeks to discontinue official use of the expression "war on terrorism."[53]

The Weather Channel

An American basic cable and satellite television channel begun in 1982 that by 2008 became a jointly owned venture between NBCUniversal and investment firms the Blackstone Group and Bain Capital. The channel broadcasts weather forecasts and weather-related news, domestically and internationally, along with documentaries and entertainment programming related to weather.[54]

White House package

Contains documents prepared for the president's action on a governor's request. It includes the governor's request and the Federal Emergency Management Agency (FEMA) director's memorandum, made up of a summary of significant aspects of the event, statistics relative to damage and losses; outlines of the contributions made by federal, state, local, and private agencies; a list of the unmet needs for which the governor seeks federal assistance; and a recommended course of action for the president. It also contains appropriate letters and announcements related to the action, including the FEMA director's recommendation to the president regarding whether to approve or deny the governor's request.

"Wind" versus "water" dispute

A problem of claims adjustment and contested insurance coverage often encountered after disasters that cause both wind and water damage to a private structure. Private insurers cover wind damage (but not that caused by floodwater) in their homeowner insurance policies. The National Flood Insurance Program

(NFIP) covers floodwater damage but not wind-caused damage. Consequently, sometimes after hurricanes or severe storms many homeowners have fallen into insurance "limbo" as their private insurer's claims adjuster denies claims for damage they believe is caused by flooding (not wind) and the NFIP claims adjuster rejects claims for damage they conclude was caused by wind (not floodwater). A vast number of NFIP and private homeowner insurance policyholders in Katrina damage zones ended up having their claims denied by both the NFIP and their private insurer on these grounds.

World Food Programme (WFP)

Responsible for providing rapid and self-sustaining nutritional relief to the millions of victims of man-made or natural disasters. In cases of emergency, the WFP attempts quick response but always with permission of the host government. WFP duties cover transport, delivery, and distribution of food made available by other UN agencies, other national governments, or nongovernmental organizations (NGOs). When called upon, the WFP joins in reconstruction and rehabilitation activity.

World Health Organization (WHO)

UN central agency assigned to manage health and sanitation concerns throughout the world. The WHO uses its people, authority, and expertise to assess and respond to health needs in regions and countries affected by natural and man-made disasters. The WHO operates programs designed to help the governments manage first aid supplies, improve their medical capabilities, and maintain epidemiological surveillance of disease, all important in the aftermath of disasters. The WHO works to eradicate diseases and reduce the effects of epidemics through campaigns of information and immunization.

Notes

Preface

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15 This book will use the terms *disaster management* and *emergency management* interchangeably. Some scholars of the field may object to this interchangeable use, because emergency managers are usually defined as those "who possess the knowledge, skills, and abilities to effectively manage a comprehensive [emergency] management program." Michael K. Lindell, Carla Prater, and Ronald W. Perry, *Introduction to Emergency Management* (Hoboken, NJ: Wiley, 2007), 445. Canton calls disaster management "the tactical and operational implementation of that [planning] strategy at the time of the crisis." Lucien G. Canton, *Emergency Management: Concepts and Strategies for Effective Programs* (Hoboken, NJ: Wiley, 2007), 60. Much of this book addresses president-declared emergencies and disasters. It is fair to say that emergency managers in those circumstances are also disaster managers both in strategic and tactical terms. Also, within emergency management are emergency responders, who respond directly to disaster. Emergency responder occupational specialties include firefighters, police officers, and emergency medical technicians (Lindell et al., *Introduction to Emergency Management,* 445).

Much of this study does not draw distinctions between emergency managers and emergency responders. However, it is important to recognize that emergency managers, broadly construed, and emergency responders, many qualified as emergency managers in accord with the definition above, are in the field of disaster management. Disaster management, as used in this book, includes emergency management and those organizations and individuals outside government—nonprofit organizations active in disasters, disaster insurers, corporate emergency managers, and business continuity managers.

16 See James F. Miskel, *Disaster Response and Homeland Security: What Works, What Doesn't* (Westport, CT: Praeger Security International, 2006), 23–38. Miskel makes a distinction between hazards involving life and safety and hazards calling for the protection, preservation, or restoration of agricultural resources, the environment, and certain forms of property not immediately essential to humans. He devotes an entire chapter to why the disaster management system regularly fails in catastrophic events. See also Steinberg, *Acts of God,* 128. In a "tongue-in-cheek" fashion, Steinberg recounts bizarre proposals of the U.S. Air Force to terminate threatening tornadoes using atomic bombs. For Steinberg the story is about how humans have come to use their modern scientific and technological expertise to cope with natural forces still well beyond their control, even as people have dramatically increased their vulnerability to the same forces.

17 William L. Waugh Jr., *Living with Hazards, Dealing with Disasters: An Introduction to Emergency Management* (Armonk, NY: M.E. Sharpe, 2000).

18 Ibid., 11-12.

19 For an excellent synopsis of emergency management's professionalization and its advancement within FEMA, see Patrick S. Roberts, *Disasters and the American State: How Politicians, Bureaucrats, and the Public Prepare for the Unexpected* (New York: Cambridge University Press,2013), 92–96.

20 Ibid., 4.

21 Glen Karpovich, "Professional Certification in Emergency Management," April 17, 2007, www.officer.com/article/10249956/professional-certification-in-emergency-management.

22 Roberts, *Disasters and the American State,* 15.

23 DERA provides professional support, resource-sharing, leadership opportunities, and professional networking for members and is actively involved in providing critical emergency assistance in response to several recent disasters. The organization states, "DERA members have been leading, mentoring, and diligently serving in all areas of disaster preparedness, response and recovery for more than 40 years. As technical experts and community leaders, our members have worked together to build stronger defenses against disasters by improving planning, communications and logistics, reducing risks and mitigating hazards, conducting community preparedness programs, and by sponsoring emergency response missions. As a prominent international professional association, our membership is composed of key leaders in the field of emergency management from around the world, including key government officials, volunteers, consultants, business managers, researchers, educators, students and wide range of charitable groups. Everyone working for DERA is an unpaid volunteer. We depend on initiative, teamwork and resourcefulness of our members to develop and manage all our programs." See International Association for Disaster Preparedness and Response, "Home page," www.disasters.org (accessed December 17, 2013).

24 See Katarzyna Fertala, "EMAP Proves Invaluable as Method of Standardization for Emergency Management Programs," The University of Maryland, Center for Health & Homeland Security, July 26, 2013, www.mdchhs.com/blog/emap-proves-invaluable-method-standardization-emergency-management-programs.

25 Emergency Management Accreditation Program, *The EMAP Standard,* www.emaponline.org/index.php?option=com_content&view=article&id=118&Itemid=110 (hereafter cited as EMAP website). "EMAP, as an independent nonprofit organization, fosters excellence and accountability in emergency management and homeland security programs by establishing credible standards applied in a peer review accreditation. EMAP is the

voluntary assessment and accreditation process for emergency management programs. EMAP provides a means for strategic improvement of emergency management programs, culminating in accreditation. The EMAP Standard is a scalable yet rigorous national standard for local, tribal, regional, state, national, and private sector emergency management programs. It was collaboratively developed in a series of working groups of emergency management stakeholders from government, business, and other sectors and continues to evolve to represent the best in emergency management for the public sector. The Emergency Management Standard by EMAP is the criterion used to determine qualification for accreditation. Within the standard, individual standards describe qualities or facts that must be present for accreditation" (EMAP website). The NFPA allows access to NFPA 1600 as a pdf file with validation of personal information and e -mail address. National Fire Protection Association, *NFPA 1600 Standard on Disaster/Emergency Management and Business Continutiy Programs, 2013,* www.nfpa.org/catalog/product.asp? title=&category%5Fname=&pid=160013&target%5Fpid=160013&src%5Fpid=&link%5Ftype=search&icid=&P: (accessed March 11, 2014).

26 Keith Smith, *Environmental Hazards: Assessing Risk and Reducing Disaster*, 6th ed. (New York: Routledge, 2013), 11.

27 CNN launched its twenty-four-hour television news organization in 1982 in Atlanta, Georgia.

28 See Louise K. Comfort, ed., *Managing Disaster: Strategies and Policy Perspectives* (Durham, NC: Duke University Press, 1988). See also Richard T. Sylves and Zoltan I. Buzas, "Presidential Disaster Declaration Decisions, 1953–2003: What Influences Odds of Approval." *State & Local Government Review* 39, no. 1 (2007): 3–15; Thomas A. Garrett and Russell S. Sobel, "The Political Economy of FEMA Disaster Payments," *Economic Inquiry* 41, no. 3 (2003): 496–509; Rutherford H. Platt, "Shouldering the Burden: Federal Assumption of Disaster Costs," in *Disasters and Democracy: The Politics of Extreme Natural Events,* ed. Rutherford H. Platt (Washington, DC: IslandPress, 1999), 11–46.

29 Richard T. Sylves, "The Politics and Budgeting of Federal Emergency Management" in *Disaster Management in the U.S. and Canada,* ed. Richard T. Sylves and William L. Waugh Jr. (Springfield, IL: Charles C Thomas, 1996).

30 See Platt, "Shouldering the Burden," 11–46. See also Miskel, *Disaster Response and Homeland Security.*

31 Charles R. Wise, "Organizing for Homeland Security," *Public Administration Review* 62 (September 2002): 131–144. William L. Waugh Jr. and Richard T. Sylves, "Organizing the War on Terrorism," special issue, *Public Administration Review* 62 (September 2002): 145–153.

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33 John W. Kingdon, *Agendas, Alternatives, and Public Policies,* 2nd ed. (New York: Longman, 1995), 166.

34 Donald F. Kettl, *System under Stress: Homeland Security and American Politics,* 2nd ed. (Washington, DC: CQPress, 2007), 126.

35 See John W. Kingdon, "Agendas, Alternatives, and Public Policies" in *Classics of Public Policy,* ed. Jay M. Shafritz, Karen S. Layne, and Christopher P. Borick (New York: Pearson, 2005), 148–159.

36 Anthony Downs, "Up and Down with Ecology: The 'Issue-Attention Cycle,'" *Public Interest* 28 (Summer 1972): 38–50.

37 Ibid., 39.

38 Although Downs, in "Up and Down with Ecology," is not discussing disaster specifically, his arguments are quite appropriate within the realm of disaster policy and politics.

39 Ibid., 40.

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43 Ibid., 41.

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46 Charles Perrow, *Normal Accidents* (New York: Basic Books, 1984). See also Charles Perrow, *The Next Catastrophe: Reducing Our Vulnerabilities to Natural, Industrial, and Terrorist Disasters* (Princeton, NJ: Princeton University Press, 2011).

47 Thomas Birkland, *After Disaster: Agenda Setting, Public Policy, and Focusing Events* (Washington, DC: Georgetown University Press, 1997), 128.

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68 Roberts maintains that Clinton FEMA Director James Lee Witt not only championed disaster mitigation as a core purpose of FEMA but shifted the agency away from national security work and more toward response to natural disasters, while cleverly convincing federal lawmakers that capable FEMA coordinated disaster management could advance their reelection goals. Roberts, *Disasters and the American State*, 97–103.

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6 Ibid., 49.

7 Ibid., 55.

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- physical damage to residential and commercial buildings, schools, critical facilities, and infrastructure
- economic loss, including lost jobs, business interruptions, repair and reconstruction costs
- social impacts, including estimates of shelter requirements, displaced households, and population exposed to scenario floods, earthquakes and hurricanes

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SID=42961c3bc038b5a165752bc530d8628e&node=44:1.0.1.4.59&rgn=div5. For U.S. Department of Homeland Security (DHS) rules, see Government Printing Office, Electronic Code of Federal Regulations Title 6, www.ecfr.gov/cgi-bin/text-idx?SID=76dfb460b5b 808305c4eb20404290ce9&c=ecfr&tpl=/ecfrbrowse/Title06/6cfrv1_02.tpl.

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8 Homeland Security National Preparedness Task Force,

Civil Defense and Homeland Security, 13.

9 President Richard M. Nixon, a Republican, was elected in November 1968 and inaugurated in January 1969. He won reelection in 1972 but resigned from office prematurely owing to the Watergate scandal in August 1974.

10 Keith Bea, "The Formative Years: 1950–1978," in

Emergency Management: The American Experience, 1900– 2005, ed. Claire B. Rubin (Fairfax, VA: Public Entity Risk Institute, 2007), 92. For an updated version see, Keith Bea, "The Formative Years: 1950-1978," in *Emergency Management: The American Experience: 1900-2010*, 2nded., 83–113.

11 Ibid., 101.

12 Former Speaker of the House Gerald R. Ford, a Republican, and President Nixon's appointed vice president chosen under the Constitution's Twenty-Fifth Amendment regarding presidential succession, took the presidential oath of office in August 1974. This immediately followed President Nixon's resignation. Nixon's first vice president, Spiro Agnew, having held the office five years, resigned in October 1973 under a plea agreement involving failure to report income. Ford hoped to win a full-term in the White House in 1976 but lost to Gov. Jimmy Carter, D-GA. Ford left office in January 1977 when President Carter was inaugurated.

13 Homeland Security National Preparedness Task Force, *Civil Defense and Homeland Security,* 16.

14 Ibid., 16.

15 Bea, "The Formative Years: 1950–1978," in *Emergency Management: The American Experience: 1900-2010*, 2nd ed., 106. Bea adds that Congress "amended the CDA to allow the use of the civil defense 'structure' for disasters other than those caused by enemy attack" (p. 106).

16 Homeland Security National Preparedness Task Force, *Civil Defense and Homeland Security,* 14.

17 Ibid., 17.

18 Thomas E. Baldwin, *Revised Historical Chronology of FEMA's Terrorism Consequences Management Role as Assigned by Section 2-103 of E.O. 12148* (Argonne, IL: Argonne National Laboratory, 2006), 1. Supplied as e-file to the author March 18, 2007, by William R. Cumming, FEMA General Counsel's Office, retired.

19 Ibid., 14.

20 Jerry V. Graves Jr., "Intergovernmental Relations and Hazard Mitigation," in *Natural Hazard Mitigation*, ed. Alessandra Jerolleman and John J. Kiefer (Boca Raton, FL: CRC Press, 2013), 51.

21 In addition to replacement of the Office of Civil Defense with the DCPA, Nixon Reorganization Plans No. 1 (1970) and No. 2 (1973) abolished the Office of Emergency Planning, an agency established in 1961. The Office of Emergency Planning had managed programs, functions, and activities previously housed in the Office of Emergency Preparedness, Executive Office of the White House. Nixon Reorganization Plan No. 1 reassigned preparedness tasks, doling them out to HUD (which created the Federal Disaster Assistance Administration to assume this jurisdiction), the General Services Administration (GSA), and the departments of the Treasury and Commerce.

22 Homeland Security National Preparedness Task Force, *Civil Defense and Homeland Security,* 16.

23 Claire B. Rubin and Irmak R. Tanali, *Disaster Time Line: Selected Milestone Events and U.S. Outcomes, 1965–2001* (Arlington, VA: Claire B. Rubin and Associates, 2001). Hurricane Agnes produced widespread damage. Seven states won presidential declarations of major disaster: Florida, Maryland, New York, Ohio, Pennsylvania, Virginia, and West Virginia. New York and Pennsylvania sustained damage. See also Keith Bea, "The Formative Years: 1950-1978," in *Emergency Management: The American Experience: 1900-2010*, 2nd ed., 100.

24 See H. Crane Miller, "Defense Production Act of 1950 and Homeland Security," in *A Legal Guide to Homeland Security and Emergency Management for State and Local Governments*, ed. Ernest B. Abbott and Otto J. Hertzel (Lanham, MD: National Book Network, 2006), 237.

25 Democrat Jimmy Carter beat the incumbent, though unelected, Republican president Gerald R. Ford in the 1976 general election. Carter was defeated by Reagan in the 1980 general election and so left office in January 1981.

26 Henry B. Hogue and Keith Bea, *Federal Emergency Management and Homeland Security Organization: Historical Developments and Legislative Options*, CRS Report RL33369 (Washington, DC: U.S. Congressional Research Service, 2006).

27 See Richard T. Sylves, "Federal Emergency Management Comes of Age: 1979–2001," in *Emergency Management: The American Experience: 1900-2010*, 2nd ed., ed. Claire B. Rubin (Boca Raton, FL: CRC Press, 2012), 115–166.

28 William C. Nicholson, *Emergency Response and Emergency Management Law: Cases and Materials* (Springfield, IL: Charles C Thomas, 2003), 236.

29 William L. Waugh Jr., *Living with Hazards, Dealing with Disasters: An Introduction to Emergency Management* (Armonk, NY: M.E. Sharpe, 2000), 28–29.

30 Baldwin, *Revised Historical Chronology,* 2.

31 Ibid., 2.

32 Ibid.

33 See Marc Ambinder, "America's Doomsday Secrets," *The Week*, November 2, 2012, www.theweek.com/article/index/235841americas-doomsday-secrets. Most of Ambinder's article is about his journalistic study of the classified history of the Continuity of Government program of which FEMA is a major part.

34 Homeland Security National Preparedness Task Force, *Civil Defense and Homeland Security,* 18.

35 Ibid., 19.

36 Rutherford H. Platt, "Shouldering the Burden: Federal Assumption of Disaster Costs," in *Disasters and Democracy: The Politics of Extreme Natural Events,* ed. Rutherford H. Platt (Washington, DC: Island Press, 1999), 23–26. See also Ruth McCambridge, "Study Reveals Shocking Rise in Federal Disaster Relief Costs," *Nonprofit Quarterly*, May 23, 2013, www.nonprofitquarterly.org/policysocialcontext/22344-study-reveals-shocking-rise-in-federaldisaster-relief-costs.html.

37 Allen K. Settle, "Disaster Assistance: Securing Presidential Declarations," in *Cities and Disaster: North American Studies in Emergency Management,* ed. Richard T. Sylves and William L. Waugh Jr. (Springfield, IL: Charles C Thomas, 1990).

38 Ibid., 51–52.

39 Ibid., 6–14.

40 President Ronald Reagan, a Republican, beat incumbent President Jimmy Carter in the 1980 presidential election. Reagan won a second term in 1984 and ultimately completed his presidency in January 1989, turning that post over to his former vice president, George H. W. Bush.

41 *New Georgia Encyclopedia,* s.v. "CNN," www.georgiaencyclopedia.org/articles/arts-culture/cnn. www.georgiaencyclopedia.org/articles/arts-culture/cnn.

42 Wikipedia, "List of News Channels," https://en.wikipedia.org/wiki/List_of_news_channels#Business_News_Channels.

43 President George H. W. Bush, a Republican, was elected in 1988 and inaugurated in January 1989. He served only one term, being defeated in the 1992 presidential election by Democrat William Jefferson Clinton.

44 CNN Library, "Beirut Marine Barracks Bombing Fast Facts," June 13, 2013, www.cnn.com/2013/06/13/world/meast/beirut-marine-barracks-bombing-fast-facts. The suicide truck bomb attack was traced to Hezbollah, a militant and political group originating in Lebanon, and killed 220 Marines and 21 other service personnel.

45 Keith Bea, *Federal Stafford Act Disaster Assistance: Presidential Declarations, Eligible Activities, and Funding,* CRS Report RL33053 (Washington, DC: U.S. Congressional Research Service, 2006), 3.

46 See Keith Smith, *Environmental Hazards: Assessing Risk and Reducing Disaster*, 6th ed. (New York: Routledge,2013), 381–383.

47 Ibid., 389–390.

48 Bea, *Federal Stafford Act Disaster Assistance*, 1, 4.

49 Mission assignment works in the following way. When other federal agencies besides FEMA are doing emergency management work under a presidential declaration of major disaster or emergency and the spending authority of those agencies is insufficient for them to carry out their disaster-related work, officials of those agencies may ask FEMA permission to draw funding from the president's Disaster Relief Fund under a category called *mission assignment.* A sizable share of spending in many presidentially declared major disasters stems from

mission assignment.

50 Hogue and Bea, "Federal Stafford Act Disaster Assistance," 14. See also, John Fass Morton, *Next-Generation Homeland Security: Network Federalism and the Course to National Preparedness* (Annapolis, MD: Naval Institute Press,2012), 22.

51 It should be noted that when FEMA was reinvigorated by post-Katrina legislation in 2006, it was granted permission to hire additional staff. This has allowed it to exceed its previous usual upper limit of 3,000 full-time federal workers.

52 U.S. Department of Homeland Security, Federal Emergency Management Agency Disaster Relief Fund, "Table I. Changes in Full-Time Employment." 28, www.fema.gov/pdf/about/budget/11f_fema_disaster_relief_fund_dhs_fy13_cj.pdf.

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54 Aaron Schroeder and Gary Wamsley, "The Evolution of Emergency Management in America: From a Painful Past to a Promising but Uncertain Future," in *Handbook of Crisis and Emergency Management,* ed. Ali Farazmand. (New York: Marcel Dekker, 2002).

55 According to the Center for Responsive Politics, in 2013 insurances companies have lobbied congressional bills calling for the National Flood Insurance Program (NFIP) to advance floodplain management practices in rural and agricultural areas, bills amending the Terrorism Risk Insurance Act (TRIA) of 2002 (which backstops private insurers against a portion of their losses after costly terrorism attacks inside the United States), and changes in Coastal Act of 2011, Flood Insurance Reform issues. See Center for Responsive Politics, "Insurance Lobbying," www.opensecrets.org/loby/Issue_spec.php?id=INS&year=20138sort=a&page=2. The total number of clients lobbying on insurance in 2012 exceeded 200.

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57 See John T. Gasper and Andrew Reeves, "Make It Rain: Retrospection and the Attentive Electorate in the Context of Natural Disasters," *American Journal of Political Science*

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58 Kevin Arceneaux and Robert M. Stein, "Who Is Held Responsible When Disaster Strikes? The Attribution of Responsibility for a Natural Disaster in an Urban Election," *Journal of Urban Affairs* 28 (January 2006): 43.

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60 George D. Haddow, Jane A. Bullock, and Damon P. Coppola, *Introduction to Emergency Management*, 4th ed. (Burlington, MA: Butterworth-Heinemann, 2011), 183.

61 Homeland Security National Preparedness Task Force, *Civil Defense and Homeland Security.*

62 See Morton, *Next-Generation Homeland Security*, 13.

63 Ibid., 14.

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Introduction to Emergency Management (Hoboken, NJ: Wiley, 2007), 361–362.

83 Ibid., 66.

84 Edwards, "Homeland Security from the Local Perspective," 120.

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97 Ibid., 407.

98 U.S. House of Representatives, House Subcommittee on National Security, Emerging Threats, and International Relations and the Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, statement of James L. Witt, 108th Cong., 2nd sess., March 24, 2004.

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Chapter 4. Understanding Disaster Policy through Presidential Disaster Declarations

1 To be more precise, federal laws from 1950 until 1988 when the Robert T. Stafford Act became law generally limited the president to declaring a range of natural disasters. However, well by the 1970s, presidents broadened the range of incidents declarable as disasters. Human-caused disasters of various types (i.e., chemical spills, dam failures, major city fires, and President Carter's May 6, 1980, emergency declaration for Florida to help undocumented aliens from the Mariel boatlift). Regarding the Mariel boatlift, see Federal Emergency Management Agency, "Presidential Declaration of Emergency, #3079," www.fema.gov/disaster/3079 (accessed June 17, 2013). After 1988, the Stafford Act empowered presidents to freely declare major disasters and emergencies unencumbered by the nature or cause of the incident.

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87 Bea, *Federal Stafford Act Disaster Assistance.*

88 In this book, the word *county* will be used to mean an official county or a state's equivalent of a county. Some states and U.S. territories or commonwealths do not have actual county governments (i.e., Alaska) but may employ political geographic designators used to represent county equivalents. The District of Columbia is treated as a state in its entirety.

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90 Allen K. Settle, "Disaster Assistance: Securing Presidential Declarations," in *Cities and Disaster: North American Studies in Emergency Management,* ed. Richard T. Sylves and William L. Waugh Jr. (Springfield, IL: Charles C Thomas, 1990).

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92 James L. Witt and J. Morgan, *Stronger in the Broken Places: Nine Lessons for Turning Crisis into Triumph* (New York: Times Books, 2002). See also Platt, "Shouldering the Burden," and Daniels and Clark-Daniels, *Transforming Government.*

93 Patrick S. Roberts, *Disasters and the American State: How Politicians, Bureaucrats, and the Public Prepare for the Unexpected* (New York: Cambridge University Press, 2013), 16.

94 Miskel, *Disaster Response and Homeland* Security, 118. See also Thomas A. Birkland, *After Disaster: Agenda Setting, Public Policy, and Focusing Events* (Washington, DC: Georgetown University Press, 1997).

95 William L. Waugh Jr. and Ronald John Hy, *Handbook of Emergency Management* (Westport, CT: Greenwood Press, 1990). See also Gary L. Wamsley, Aaron D. Schroeder, and Larry M. Lane, "To Politicize Is NOT to Control: The Pathologies of Control in Federal Emergency Management," *American Review of Public Administration* 26, no. 3 (1996): 263–285, and Platt, "Shouldering the Burden," 20–21.

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97 Brian Tarcey, "Flooding the Ballot Box: The Politics of Disaster," *Harvard Magazine,* March–April 2004.

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99 *American Heritage Dictionary,* 2nd collegiate ed., s.v. "overwhelm."

100 Ibid., 1144.

101 Ibid.

102 Sylves and Buzas, "Presidential Disaster Declaration Decisions," 13.

103 Reeves, "Political Disaster? Presidential Disaster Declarations," 5–6.

104 Tarcey, "Flooding the Ballot Box," 1.

105 Reeves, "Political Disaster? Presidential Disaster Declarations," 3.

106 Ibid., 11.

107 Ude J. Dymon and Rutherford H. Platt, "U.S. Federal Disaster Declarations: A Geographical Analysis," in *Disasters and Democracy: The Politics of Extreme Natural Events,* ed. Rutherford H. Platt (Washington, DC: Island Press, 1999).

108 Miskel, *Disaster Response and Homeland Security*, 118–120.

109 Ibid.

110 Means testing involves applying for and meeting rules or conditions of qualification. Presumably those who fail to meet means-testing rules or conditions are denied the government benefit they seek. 111. Philip G. Joyce and Amy E. Kneedler, "Emergency Management Competencies and Incentives and Implications for Funding in the Intergovernmental Context" (paper presented at the Sixtieth National Conference of the American Society for Public Administration, 1999).

112 Ibid., 13–14.

113 Ibid., 14.

114 U.S. Government Accountability Office, "Disaster Assistance."

115 Distributive politics assumes government resources are allocated in excess of need. Distributive politics also means that a massive group (i.e., the national taxpayer) sacrifices what for each of contributor is a small sum of money in order to lavishly disburse this cumulated funding to specific locations (disaster damage zones) and within that to a much, much smaller pool of beneficiaries (disaster affected victims and subnational governments). In other words, the payer hardly feels an economic sacrifice while the beneficiary seemingly enjoys a largely undeserved government windfall.

116 William L. Waugh, Jr., *Living with Hazards, Dealing with Disasters: An Introduction to Emergency Management* (Armonk, NY: M.E. Sharpe, 1999).

117 Platt, "Shouldering the Burden," 21–22.

118 Wamsley et al., "To Politicize Is NOT to Control."

119 Sylves, "The Politics and Budgeting of Federal Emergency Management," 32; U.S. Government Accountability Office, "Disaster Assistance," 9–15.

120 Manny Fernandez, "FEMA Denied Texas Request for Full Disaster Aid, Rankling Stricken Town," *The New York Times*, June 22, 2013, www.nytimes.com/2013/06/23/us/fema-denies-texas-request-for-full-disaster-aid-rankling-stricken-town.html?pagewanted=all&_r=0 (accessed July 1, 2013). Governor Perry appealed the turndown and won his case. Texas was issued a major disaster declaration for the City of West explosion.

121 James David Barber, "Presidential Character," in *American Government: Readings and Cases,* ed. Karen O'Connor (Boston: Allyn & Bacon, 1995), 204.

122 Thomas Anton, *American Federalism and Public Policy* (New York: Random House, 1989); Paul E. Peterson, *The Price of Federalism* (Washington, DC: Brookings Institution, 1995); David B. Walker, *The Rebirth of*

Federalism: Slouching toward Washington (Chatham, NJ: Chatham House, 1995); Joyce and Kneedler, "Emergency Management Competencies."

Chapter 5. The Role of Scientists and Engineers

1 See Roger A. Pielke Jr., *The Honest Broker: Making Sense of Science in Policy and Politics* (New York: Cambridge University Press, 2007). See also Sylvia Kraemer, *Science and Technology Policy* (Piscataway, NJ: Rutgers University Press, 2006) and Kaye Husbands Fealing et al., eds., *The Science of Science Policy* (Palo Alto, CA: Stanford University Press, 2011).

2 The late Professor Stephen H. Schneider, someone this author was honored to know and work with for a short time at an Aspen Global Change Institute workshop, was an extraordinary and prolific researcher and public educator on climate change. He advised every president from Nixon to Obama on the subject, and for his work on the UN International Panel on Climate Change he was awarded a Nobel Prize in 2007. Dr. Schneider understood the potential for more frequent and intense disasters owing to global climate change and its effects. He held a doctorate in mathematical engineering and plasma

physics, worked twenty years at the National Center for Atmospheric Research, and joined the Stanford faculty in the mid-1990s. Douglas Martin, "Stephen H. Schneider, Climatologist, Is Dead at 65," *New York Times*, July 20, 2010, www.nytimes.com/2010/07/20/science/earth/20schneider.html?_r=0 (accessed July 8, 2013). See Stephen H. Schneider et al., *Climate Change Science and Policy* (Washington, DC: Island Press, 2010).

3 Edward A. Thomas, "Natural Hazards and the Law," in *Natural Hazard Mitigation*, ed. Alessandra Jerolleman and John J. Kiefer (Boca Raton, FL: CRC Press, 2013), 146–148.

4 See Jiah-Shin Teh and Harvey Rubin, "Dealing with Pandemics: Global Security, Risk Analysis, and Science Policy," in *Learning from Catastrophes*, ed. Howard Kunreuther and Michael Useem (Upper Saddle River, NJ: Pearson Education, 2010), 211–234.

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9 National Research Council, *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism* (Washington, DC: National Academies Press, 2002).

10 National Research Council, *Risk Analysis and Uncertainty: Flood Damage Reduction Studies* (Washington, DC: National Academies Press, 2000).

11 The National Laboratories system includes the Argonne, Brookhaven, Fermi, Idaho, Lawrence-Berkeley,

Lawrence-Livermore, Los Alamos, Oak Ridge, Pacific Northwest, and Sandia National Laboratories, as well as the National Renewable Energy Laboratory.

12 See Rens van Munster, "Securitization." in Oxford Bibliographies, at www.oxfordbibliographies.com/view/document/obo-9780199743292/obo-9780199743292-0091.xml (accessed November 1, 2013). In international relations, "A securitizing speech act needs to follow a specific rhetorical structure, derived from war and its historical connotations of survival, urgency, threat, and defense. This leads the Copenhagen school [of international relations study] to define securitization as a speech act that has to fulfill three rhetorical criteria. It is a discursive process by means of which an actor (1) claims that a referent object is existentially threatened, (2) demands the right to take extraordinary countermeasures to deal with that threat, and (3) convinces an audience that rule-breaking behavior to counter the threat is justified. In short, by labeling something as 'security,' an issue is dramatized as an issue of supreme priority. One can therefore think of securitization as the process through which non-politicized (issues are not talked about) or politicized (issues are publicly debated) issues are elevated to security issues that need to be dealt with urgently, and that legitimate the bypassing of public debate and democratic procedures." Ibid.

13 For more than thirty years, scholars of many stripes have discussed "big science." The terms of this discussion were framed by the popular writings of the physicist Alvin Weinberg and the physicist-historian Derek de Solla Price in the 1960s. Both authors focused on the rapidly increasing size and expense of scientific projects, both identified this increase in scale as a distinctive feature of science in the post–World War II era, and both worried about the consequences of the "disease" of "big science." Catherine Westfall, "Rethinking Big Science: Modest, Mezzo, Grand Science and the Development of the Bevalac, 1971– 1993," *Isis* 94 (March 2003): 32. www.ncbi.nlm.nih.gov/pubmed/12725103 (accessed February 4, 2014).

14 See also Alexander J. Morin, *Science Policy and Politics* (Englewood Cliffs, NJ: Prentice Hall, 1993), 142.

15 W. Henry Lambright, *Governing Science and Technology* (New York: Oxford University Press, 1993).

16 See National Science Foundation, "Interdisciplinary Research in Hazards and Disasters (Hazards SEES)," www.nsf.gov/pubs/2012/nsf12610/nsf12610.htm (accessed October 30, 2013). NSF officials write, "The overarching goal of Hazards SEES is to catalyze well-integrated inter-disciplinary research efforts in hazards-related science and engineering in order to improve the understanding of natural hazards and technological hazards linked to natural phenomena, mitigate their effects, and to better prepare for, respond to, and recover from disasters. The goal is to effectively prevent hazards from becoming disasters. Hazards SEES aims to make investments in strongly interdisciplinary research that will reduce the impact of such hazards, enhance the safety of society, and contribute to sustainability. The Hazards SEES program is a multi-directorate program that seeks to: (1) advance understanding of the fundamental processes associated with specific natural hazards and technological hazards linked to natural phenomena, and their interactions; (2) better understand the causes, interdependences, impacts and cumulative effects of these hazards on individuals, the natural and built environment, and society as a whole; and (3) improve capabilities for forecasting or predicting hazards, mitigating their effects, and enhancing the capacity to respond to and recover from resultant disasters." Ibid.

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18 National Research Council, *Facing Hazards and Disasters: Understanding Human Dimensions* (Washington, DC: National Academies Press, 2006).

19 William L. Waugh Jr., *Living with Hazards, Dealing with Disasters: An Introduction to Disaster Management* (Armonk, NY: M.E. Sharpe, 2000).

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25 See also Institute for Crisis, Disaster and Risk Management of the George Washington University, University of Mississippi's Clinical Disaster Research Center, Center for Natural Hazards Research of East Carolina University, Hazards and Vulnerability Research Institute of University of South Carolina, Center for Hazards Research and Policy Development at the University of Louisville, Center for Hazards and Risk Research at Columbia University, Cascadia Hazards Institute of Central Washington University, International Hurricane Center at Florida International University, University of Wisconsin Disaster Management Center, Louisiana State University Hurricane Center, California State University's Chico Center for Hazards Research, Florida Catastrophic Storm Risk Management Center, Millersville University of Pennsylvania Center for Disaster Research and Education, Texas A&M University Hazards Reduction and Recovery Center, Texas State University's James and Marilyn Lovell Center for Environmental Geography and Hazards Research, University of California at Los Angeles Center for Public Health and Disasters, University of New Orleans Center for Hazards Assessment Response and Technology, University of North Texas Emergency Administration and Planning, University of Pennsylvania Wharton Risk Management and Decision Processes Center, and University of South Florida Center for Disaster Management and Humanitarian Assistance. Most of these organizations are listed at University of Colorado Hazards Center, "Resources," www.colorado.edu/hazards/resources/centers/academic.html (accessed November 1, 2013).

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36 Lucien G. Canton, *Emergency Management: Concepts and Strategies for Effective Programs* (Hoboken, NJ: Wiley,2007), 184.

37 Ibid., 184–185.

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39 Keith Smith, *Environmental Hazards: Assessing Risk and Reducing Disaster*, 6th ed. (New York: Routledge, 2013), 330.

40 Ibid., 330.

41 Lucien G. Canton, *Emergency Management,* 196. Canton advises, "Written plans do serve a purpose within the (local) program. They document the measures that a community has put in place to deal with risk and can provide continuity in organizations where turnover is high." Ibid., 196. He emphasizes that plans represent an organizational consensus, must be kept current, and must be used as the basis for training and exercises.

42 Smith, *Environmental Hazards,* 6th ed., 80.

43 This boxed section is adapted from Richard T. Sylves and Louise K. Comfort, "The Exxon Valdez and BP Deepwater Horizon Oil Spills: Reducing Risk in Socio-Technical Systems," special issue, *American Behavioral Scientist* 56(I) 76–103 © 2012 Sage Publications Reprints and permissions .nav DOI: 10.1177/0002764211413116, http://abs.sagepub.com http://abs.sagepub.com/content/56/1/76 (accessed November 6, 2013).

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56 William R. Cumming and Richard T. Sylves, "FEMA's Place in Policy, Law, and Management: A Hazardous Materials Perspective, 1979–2003," in *Homeland Security Law and Policy,* ed. William C. Nicholson (Springfield, IL: Charles C Thomas, 2005), 34.

57 Haddow and Bullock, *Introduction to Emergency Management,* 2nd ed., 169.

58 Ibid., 170.

59 Cumming and Sylves, "FEMA's Place in Policy, Law, and Management," 34, 36.

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61 Haddow and Bullock, *Introduction to Emergency Management,* 2nd ed., 285.

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84 Masaharu Kitamura, "Extraction of Lessons from the Fukushima Daiichi Accident Based on a Resilience Engineering Perspective" (Proceedings of the Fourth Resilience Engineering Symposium, June 8–10, 2011, Sophia Antipolis, France, 142–174), http://books.openedition.org/pressesmines/1031 (accessed November 7, 2013). Kitamura adds, "Combinatorial events caused by a 'common cause.' This is well-known terminology in the area of PRA (probabilistic risk assessment). Typical examples of an event in this category are earthquakes, floods, fires, etc. At Fukushima, the combined earthquake and tsunami disaster, which had a low probability, actually happened. Note that Units 1 to 4 of the Fukushima NPP would have survived either the earthquake or tsunami alone. Based on the lessons, we can expand our scope to cover a wider class of common causes that may lead to the simultaneous occurrence of severe events. The failure to prevent the Fukushima disaster was caused by incorrectly estimating the probability of the combined occurrence of an earthquake and tsunami. In hindsight, it is clear that the two events are not independent at all." Ibid.

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88 Haddow and Bullock, *Introduction to Emergency Management,* 2nd ed., 66.

89 Richard T. Sylves, "Earthquakes," in *Handbook of Emergency Management,* ed. William L. Waugh Jr. and Ronald W. Hy (Westport, CT: Greenwood Press, 1991), 33–34.

90 Federal Emergency Management Agency, "HAZUS, FEMA's Software Program for Estimating Potential Losses from Disasters." February 28, 2014, www.fema.gov/hazus (accessed February 28, 2014).

91 MCEER is not the only NSF-supported earthquake engineering research center. There is also the Mid-America Earthquake Center, run by the University of Illinois at Urbana-Champaign, and the Pacific Earthquake Engineering Research Center, administered by the University of California at Berkeley. See National Research Council, *Facing Hazards and Disasters,* 30.

92 Haddow and Bullock, *Introduction to Emergency Management,* 2nd ed., 67.

93 See Keith Smith, *Environmental Hazards*, 6th ed., 247–250, 258, 260–261. Smith examines tornadoes as physical phenomena, reviews issues of life loss and damage from tornadoes, and takes up the political and social issues of local tornado preparedness.

94 Loran B. Smith and David T. Jervis, "Tornadoes," in Waugh and Hy, *Handbook of Emergency Management,* 106–128.

95 See Richard T. Sylves, *Disaster Policy and Politics,* 1st ed. (Washington, DC: CQ Press, 2008), 126.

96 U.S. Federal Communications Commission, "Guide, Emergency Alert System," www.fcc.gov/guides/emergency-alert-system-eas (accessed February 28, 2014).

97 NOAA National Severe Storms Laboratory, "About NSSL," www.nssl.noaa.gov/about (accessed February 28, 2014).

98 NOAA National Severe Storm Laboratory, "Tornado Research: Basic Convective and Mesoscale Research," www.nssl.noaa.gov/research/tornadoes (accessed February 28, 2014).

99 Ibid.

100 Portions of this section were adapted from Sylves, *Disaster Policy and Politics,* 1st ed., 128.

101 U.S. Army Corps of Engineers, Office of History, *The History of the U.S. Army Corps of Engineers* (Stockton, CA: University Press of the Pacific, 2004).

102 See Orrin H. Pilkey and Katherine L. Dixon, *The Corps and the Shore* (Washington, DC: Island Press, 1996).

103 U.S. Department of Homeland Security, "Homeland Security Presidential Directive 7: Critical Infrastructure Identification, Prioritization, and Protection," December 17, 2003, www.dhs.gov/homeland-security-presidential-directive-7 (accessed February 28, 2014).

104 See Gary C. Kessler, "The Impact of Cyber-Security on Critical Infrastructure Protection," *in Critical Issues in Homeland Security*, ed. James D. Ramsay and Linda Kiltz(Boulder, CO: Westview Press, 2014), 237–238, and Sylves, *Disaster Policy and Politics,* 1st ed., 129.

105 The Disaster Relief Act of 1974 was one of the first laws to advance disaster mitigation through augmented federal post-disaster funding to states and localities.

106 Robert Bolin and Lois Stanford, *The Northridge Earthquake: Vulnerability and Disaster* (London: Routledge, 1999).

107 Thomas A. Birkland, *After Disaster: Agenda Setting, Public Policy, and Focusing Events* (Washington, DC: Georgetown University Press, 1997). See also Thomas A. Birkland, *Lessons of Disaster: Policy Change after Catastrophic Events* (Washington, DC: Georgetown University Press, 2006).

108 President Barack Obama, "Remarks by the President on Climate Change," at Georgetown University, Washington, DC, June 25, 2013, www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change (accessed November 1, 2013).

Chapter 6. Intergovernmental Relations in Disaster Policy

1 David R. Morgan and Robert E. England, *Managing Urban America,* 4th ed. (Chatham, NJ: Chatham House,1996), 41.

2 At this writing, the Federated States of Micronesia, the Marshall Islands, the Northern Marianas, and the Republic of Palau, all former U.S. trust or commonwealth governments, operate under respective compacts of free association with the United States. Under terms of some of these compacts the United States has agreed to continue to provide post-disaster relief assistance. This is examined in Chapter 8.

3 The DHS updated, revised, and renamed the National Response Plan (NRP). The NRP is, as of early 2008, to be referred to as the National Response Framework (NRF). I chiefly discuss the NRF in this book.

4 Thomas J. Anton, *American Federalism and Public Policy*

(New York: Random House, 1989). See also David B. Walker, *The Rebirth of Federalism: Slouching toward Washington* (Chatham, NJ: Chatham House, 1995).

5 Peter J. May, *Recovering from Catastrophes: Federal Disaster Relief Policy and Politics* (Westport, CT: Greenwood Press, 1985). See also Peter J. May and Walter W. Williams, *Disaster Policy Implementation: Managing Programs under Shared Governance* (New York: Plenum Press, 1986).

6 Charlie Brennan and John Aguilar, "Eight Days, 1,000-Year Rain, 100-Year Flood: The Story of Boulder County's Flood of 2013." September 22, 2013, www.dailycamera.com/news/boulder-flood/ci_24148258/boulder-countycolorado-flood-2013-survival-100-rain-100-year-flood (accessed November 30, 2013).

7 Ibid.

8 Ibid.

9 Ibid.

10 Ibid.

11 Ibid.

12 Ibid.

13 Ibid.

14 Ibid.

15 Ibid.

16 Ibid.

17 Ibid.

18 Ibid.

19 Ibid.

20 There are exceptions. For example, in cases of bioterror attack federal law provides for federal agencies to direct state and local governments in a command and control fashion. In cases of national emergency, as might be expected after a weapon of mass destruction attack on the nation, federal authority is paramount. Some authorities

contend that the NRP, or, today, NRF, and NIMS embody command and control procedures, which they in fact do. However, it should not then be assumed that the federal government or federal agency officials are therefore in command and control relationships with state and local officials under either the NRP/NRF or NIMS.

21 Charles R. Wise and Rania Nader, "Organizing the Federal System for Homeland Security: Problems, Issues, and Dilemmas," *Public Administration Review* 62 (September 2002): 44–57.

22 James Lee Witt and J. Morgan, *Stronger in the Broken Places: Nine Lessons for Turning Crisis into Triumph* (New York: Times Books, 2002).

23 George D. Haddow and Jane A. Bullock, *Introduction to Emergency Management,* 2nd ed. (Boston: Butterworth-Heinemann, 2006), 5.

24 FEMA permanent staff has never exceeded 2 percent of the total DHS permanent staff.

25 *Recruited* may be too strong a word because it may well be that state and local officials were anxious to join the federal effort and do what they could to prevent future 9/11-scale attacks on the nation.

26 For a classical work on federal reorganization politics, see Harold Seidman, *Politics, Position and Power: The Dynamics of Federal Organization,* 5th ed. (New York: Oxford University Press, 1998).

27 Keith Bea, *Federal Stafford Act Disaster Assistance: Presidential Declarations, Eligible Activities, and Funding,* CRS Report RL33053 (Washington, DC: Congressional Research Service, 2006), 10.

28 Because FEMA recommendations to the president are protected by executive privilege, it is not yet possible to know how many times, if ever, a president has denied a governor a FEMA-recommended category of disaster assistance.

29 David A. McEntire, *Disaster Response and Recovery* (Hoboken, NJ: Wiley, 2007), 252–257.

30 Keith Bea, *Federal Stafford Act Disaster Assistance,* 7–8. 31. Ibid., 9.

32 Haddow and Bullock, *Introduction to Emergency Management,* 2nd ed., 5. Remember, whereas all major disaster declarations require a gubernatorial request and, generally, findings and certifications, emergency declaration requirements are less rigorous. The president may even issue an emergency declaration without a gubernatorial request if there is a significant federal interest in the disaster or if the federal government is in some manner liable for the disaster itself. Also, specific thresholds or calculations of past averages are not considered for emergency declarations, but FEMA officials do assess whether all other resources and authorities available to meet the crisis are inadequate before recommending that the president issue an emergency declaration.

33 Frances E. Winslow, "Intergovernmental Challenges and California's Approach to Emergency Management," in *Disaster Management in the U.S. and Canada,* 2nd ed., ed. Richard T. Sylves and William L. Waugh Jr. (Springfield, IL: Charles C Thomas, 1996), 115.

34 Lucien G. Canton, *Emergency Management: Concepts and Strategies for Effective Programs* (Hoboken, NJ: Wiley, 2007), .296.

35 Ibid., 297.

36 Guy E. Daines, "Planning, Training, and Exercising," in *Emergency Management: Principles and Practice,* ed. Thomas E. Drabek and Gerard J. Hoetmer (Washington, DC: International City Management Association, 1991), 164–165.

37 See William L. Waugh Jr. and Ronald John Hy, "The Utility of All-Hazards Programs," in *Handbook of Emergency Management,* ed. William L. Waugh Jr. and Ronald John Hy (Westport, CT: Greenwood Press, 1991).

38 See Walker, *The Rebirth of Federalism*, 23.

39 CBS News, Correspondent Carol Kopp, "The Bridge to Gretna, Why Did Police Block Desperate Refugees from New Orleans?" *60 Minutes,* December 18, 2005, www.cbsnews.com/stories/2005/12/15/60minutes/main1129440_page3.shtml (accessed February 4, 2014).

40 Ibid.

41 Douglas Brinkley, *The Great Deluge: Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast* (New York: Morrow, 2006), 469. Brinkley's account of the incident generally corresponds to the *60 Minutes* account.

42 CBS News, "The Bridge to Gretna."

43 Ibid.

44 Brinkley, *The Great Deluge,* 469–472.

45 Ibid., 469, and CBS News, "The Bridge to Gretna."

46 CBS News, "The Bridge to Gretna."

47 Ibid.

48 This paragraph is extracted from CBS News, "The Bridge to Gretna."

49 Ibid.

50 Ibid.

51 Ibid.

52 Brinkley, *The Great Deluge,* 472.

53 CBS News, "The Bridge to Gretna."

54 Ibid.

55 This paragraph is extracted from CBS News, "The Bridge to Gretna."

56 Brinkley, *The Great Deluge,* 472–473.

57 Associated Press, "Judge Dismisses Case over Katrina Bridge Blockade," February 2, 2010, http://neworleanscitybusiness.com/blog/2010/02/02/judge-dismisses-case-over-katrina-bridge-blockade/#ixzz2nImRf8a and http://neworleanscitybusiness.com/blog/2010/02/02/judge-dismisses-case-over-katrina-bridge-blockade (accessed December 12, 2013).

58 The NIMS document is available at www.fema.gov/nims.

59 At least one early draft of the NIMS produced by the DHS and others was criticized for failing to consult enough state and local emergency management officials.

60 *9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States* (New York: Norton, 2004).

61 Holly Harrington, "A Message from Michael D. Brown," *Transitioning Newsletter* (a weekly electronic newsletter with DHS transition information for FEMA employees), March 5, 2003.

62 Donald W. Walsh et al., *National Incident Management System: Principles and Practice,* 2nd ed. (Sudbury, MA:

Jones & Bartlett, 2012), xxv.

63 Ibid., 24.

64 Kathleen J. Tierney, "Recent Developments in U.S. Homeland Security Policies and Their Implications for the Management of Extreme Events," in *Handbook of Disaster Research,* ed. Havidan Rodriguez, Enrico L. Quarantelli, and Russell R. Dynes (New York: Springer, 2007).

65 Canton, *Emergency Management,* 28.

66 *9/11 Commission Report* and the Gilmore Commission, Fifth Annual Report to the President and the Congress of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction (the so-called Gilmore Commission), in *Forging America's New Normalcy: Securing Our Homeland, Preserving Our Liberty* (Arlington, VA: RAND, 2003).

67 Samuel Clovis Jr., "Promises Unfulfilled: The Suboptimization of Homeland Security National Preparedness," *Homeland Security Affairs* IV, no. 3 (October 2008): 14–15, www.hsaj.org/?fullarticle=4.3.3 (accessed March 1, 2014).

68 There is a 2011 version of NIMS available at Federal Emergency Management Agency, "NIMS Overview Presentation," www.fema.gov/media-library/assets/documents/29009?id=6449 (accessed December 11, 2013). NIMS is a comprehensive, national approach to incident management. It provides the template for incident management, regardless of cause, size, location, or complexity. NIMS is applicable at all jurisdictional levels and across functional disciplines.

69 Richard T. Sylves, "The Politics and Budgeting of Federal Emergency Management," in *Disaster Management in the U.S. and Canada,* 2nd ed., ed. Richard T. Sylves and William L. Waugh Jr. (Springfield, IL: Charles C Thomas, 1996), 26–45.

70 See Rutherford H. Platt, "Federalizing Disasters: From Compassion to Entitlement," in *Disasters and Democracy: The Politics of Extreme Natural Events,* ed. Rutherford B. Platt (Washington, DC: Island Press, 1999).

71 Local governments in most states are obligated to pay some share of the state-local match. Some state governments require their local governments to pay the entire state-local match. However, most states have some type of arrangement for splitting payment of the state-local match between localities and the state government. When the president decides to significantly reduce the state-local match for a specific major disaster, perhaps approving a 90 percent/10 percent federal/state-local match as was done for Hurricane Katrina, states may have a further incentive to shoulder most of the match in order to maximize federal assistance. However, the incidence of the state-matching subsidy needs to be considered. In other words, sometimes states replace revenue dedicated to a generous state-local match by asking counties receiving disaster funds to increase the local sales tax by some percentage with the resulting revenue stream flowing back to the state government.

72 See James F. Miskel, *Disaster Response and Homeland Security: What Works, What Doesn't* (Westport, CT: Praeger,2006).

73 Bea, *Federal Stafford Act Disaster Assistance,* 3. See Cornell University Law School. Legal Information Institute. 42 U.S. Code § 5121 - Congressional findings and declarations. *Robert T. Stafford Disaster Assistance and Emergency Relief Act of 1988,* as Amended, 42 *U.S. Code,* title 42, chap. 68, sec. 5121, para. B, www.law.cornell.edu/uscode/text/42/5121 (accessed February 4, 2014). "All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State. Such a request shall be based on a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that Federal assistance is necessary." United States Code, V. 26, Title 42, The Public Health and Welfare, (2), Major Disaster" (Washington, DC: Government Printing Office, 2006).

74 Bea, *Federal Stafford Act Disaster Assistance,* 4.

75 American Red Cross, "Disaster Relief," www.redcross.org/what-we-do/disaster-relief (accessed March 9, 2014).

76 National Academy of Public Administration, *Coping with Catastrophe: Building an Emergency Management System to Meet People's Needs in Natural and Manmade Disasters* (Washington, DC: National Academy of Public Administration, 1993).

77 National Voluntary Organizations Active in Disaster, "Who We Are," www.nvoad.org/network (accessed March 8, 2014).

78 Jane A. Bullock et al., *Introduction to Homeland Security,* 2nd ed. (Boston: Butterworth-Heinemann, 2006), 117.

79 Ibid., 116–117.

80 Federal Emergency Management Agency, "Incident Management CORE Positions," www.fema.gov/about-fema/employee-news-and-announcements/incident-man-agement-core-positions (accessed December 11, 2013).

81 Federal Emergency Management Agency, "Frequently Asked Questions for Incident Management CORE Vacancies," www.fema.gov/media-library/assets/documents/33328?id=7766 (accessed December 11, 2013).

82 Halliburton, "History of Halliburton," www.halliburton.com/en-US/about-us/history-of-halliburton-of-halliburton.page?node-id=hgeyxt5y (accessed February 5, 2014).

83 HalliburtonWatch.org, "About Us," www.halliburtonwatch.org/aboutus.html (accessed February 5, 2014).

84 Booz Allen Hamilton, "What We Do: Helping Government and Business Leaders Take on Complex Issues," www.boozallen.com/consulting (accessed February 5, 2014).

85 Booz Allen Hamilton, "Government Contract Vehicles," www.boozallen.com/about/doingbusiness/contract-vehicles (accessed February 5, 2014). Federal agencies have at their disposal convenient and easy-to-use mechanisms for obtaining a wide variety of management and technology services. Through the Governmentwide Acquisition Contracts (GWAC), General Service Administration (GSA) Federal Supply Schedules (FSS), Blanket Purchase Agreements (BPAs), and Information Analysis Centers (IACs) that Booz Allen has been awarded, agencies have rapid access to a wide range of services. Booz Allen can draw on experts across the firm to make these services available quickly and with minimum paperwork under Time and Material, Firm Fixed Price, or Cost Option contracts. Ibid.

86 Bechtel Corporation, "Overview: A Global Leader in Engineering, Procurement, Construction, and Project Management," www.bechtel.com/overview.html (accessed February 5, 2014). "*Engineering News-Record (ENR)* has named Bechtel the top U.S. construction contractor for 15 straight years… . Founded in 1898, Bechtel has worked on more than 23,000 projects in 140 countries on all seven continents. Today, our 53,000 colleagues join with customers, partners, and suppliers on hundreds of diverse projects in nearly 50 countries. Among the work we do, includes: roads and rail systems, airports and seaports, fossil and nuclear power plants, refineries and petrochemical facilities, mines and smelters, renewable energy, defense and aerospace facilities, environmental cleanup projects, communications networks, pipelines, oil and gas field development."

87 Ibid. "Privately owned with headquarters in San Francisco… in 2012, [Bechtel] had revenues of $37.9 billion (in U.S. dollars) and new contract awards valued at $23.9 billion (in U.S. dollars)… . Bechtel has been on the forefront of engineering and construction for115 years. What began as a railroad-grading operation in the Oklahoma Territory has grown into a multinational company with hundreds of projects around the world. Some of [Bechtel's] signature projects include: Bay Area Rapid Transit, Cingular Wireless Expansion, Dulles Corridor Metrorail Extension, High Speed 1, Hong Kong International Airport, Hoover Dam, Hurricane Katrina Disaster Relief, Iraq Reconstruction, Tacoma Narrows Bridge, and the Three Mile Island Cleanup."

88 Dewberry, "Dewberry Profile," www.dewberry.com/About (accessed February 5, 2014). Headquartered in Fairfax, Virginia, Dewberry has 2,000 employees who work in more than 40 locations and 18 states. Dewberry reports that it provides services in planning, engineering, architecture, program management, consulting, surveying, and mapping. It states, "Our architects, engineers, and consultants—many of whom are internationally recognized authorities—offer a proven track record of providing award-winning services and solutions to a wide variety of public- and private-sector clients. We've built long-term, trusted relationships through unsurpassed client service and a dedication to solving today's—and tomorrow's— most complex challenges. In the process, we help our clients transform their communities and improve the quality of life."

89 Dewberry, "Dewberry Sending Employees to Assist FEMA in Hurricane Katrina Response," *Emergency Management,* September 22, 2005, www.dewberry.com/mitigation.asp?id=730.

90 Dewberry, "Dewberry, PaTH Team, Win FEMA Housing Contract," August 16, 2006, www.dewberry.com/news.asp?id=906.

91 In 2012, FEMA discontinued its Disaster Assistance Employee (DAE) program and rehired many of the released DAEs under a new employment title. There are two sides to the matter of DAEs. Some DAEs complained that they were not appreciated by FEMA, got little or no health or injury insurance protection when FEMA-deployed, were poorly matched in terms of their respective skill sets to tasks assigned, and often were awkwardly demobilized by FEMA. Conversely, FEMA officials complained that the cost and labor of recruiting, selecting, and maintaining lists of qualified DAEs, many of whom had high turnover rates or who incurred some incapacity or aged out of safe deployment, was substantial. DAE travel and deployment expenses were also significant for a cash-strapped FEMA. There may have also been a better economy of scale in hiring contractors to directly do DAE work or compile and manage local and region lists of qualified DAE-type volunteers situated closer to disaster sites.

92 The DHS Office of the Inspector General maintains a website that displays the investigations and reports it has conducted, a share of which involve problems or misconduct of government contractors, as well as mismanagement of contracts by state and local emergency management agencies. U.S. Department of Homeland Security, Office of Inspector General, "Component: Federal Emergency Management Agency (FEMA)," www.oig.dhs.gov/index.php?option=com_content&view=article&id=25&Itemid=38 (accessed February 5, 2014).

93 Project On Government Oversight, "Federal Contractor Misconduct Database," www.contractormisconduct.org (accessed February 1, 2014).

94 William L. Waugh Jr. and Richard T. Sylves, "Organizing the War on Terrorism," special issue, *Public Administration Review* 62 (September 2002): 81–89.

Chapter 7. Civil-Military Relations and National Security

1 An exception might be the case of municipal emergency plans for protecting foreign embassies and legations within their jurisdictions. Others might be aviation security at a municipal airport, special municipal functions that fall to cities situated on national borders, cooperation in local law enforcement relevant to addressing international narcotic or drug interdiction, and certain port security functions.

2 Securitization refers to imbuing emergency management with national security and state secrecy duties and obligations.

3 Kurt A. Heppard and Steve G. Green, "Department of Defense Capabilities in Homeland and Transportation Security," United States Air Force Academy (paper presented at the Annual Conference of the American Society for Public Administration, Denver, March/April 2006). See also M. C. Hammond, "The *Posse Comitatus* Act: A Principle in Need of Renewal," *Washington University Law Quarterly* 75, no. 20 (1997).

4 The Posse Comitatus Act of 1878 has deep roots in American history. The American colonies were subjected to tyrannical and repressive British control. The Boston Massacre of 1770 was a turning point for the American colonists when the British Army was sent to Boston to serve as police. The now-infamous story of the confrontation between the British troops and colonists who were rioting ended with the British soldiers turning their weapons on the civilian population. These were the first recorded deaths of the American Revolutionary War. One significant result was written in the Declaration of Independence; the founding fathers of the Constitution detailed a citizen's right to due process as well as the manner in which an American army would interact with citizens. For example, the army was not to be quartered among the population and was required to be servile and accountable to civilian authority. This reasoning inheres in the Posse Comitatus Act, a measure also aimed at placating the post–Civil War concerns of people in former Confederate states. The law bars active-duty military from acting as a domestic police force. See James C. Holloway, "Are State & Local Emergency Response Agencies Exceedingly Militarized?" (unpublished paper for the author's EMSE 6305, Introduction to Crisis and Emergency Management, Fall 2012). See also Patrick S. Roberts, Robert Ward, and Gary Wamsley, "The Evolving Federal Role in Emergency Management: Policies and Processes," in *Emergency Management: The American Experience 1900–2010*, 2nd ed., ed. Claire B. Rubin (BocaRaton, FL: CRC Press, 2012), 270.

5 There are certain special exceptions, but these relate to primarily military purposes as might apply under the Uniform Code of Military Justice, or which involve the authority of a commander on a military base, or that involve protection of state secrets or protection of military people and Defense Department property. See Gregory M. Huckabee, "Partnering with the Department of Defense for Improved Homeland Security," in *Homeland Security Law and Policy,* ed. William C. Nicholson (Springfield, IL: Charles C Thomas, 2005), 171.

6 James Jay Carafano, "Catastrophic Disaster and the Future of the Military Response," *Disaster Preparedness* 1, no. 1 (Summer 2006), www.Wilburforce.edu:80/cdsp/cdsp_art2_02.html.

7 Hammond, "The *Posse Comitatus* Act," 953.

8 For an excellent exposition on what the military offers in the way of post-disaster support, see Huckabee, "Partnering with the Department of Defense," 164.

9 Ibid., 164.

10 James F. Miskel documents that the military was often called out by the president to address disasters in the nine-teenth century. He explains that institutionalized disaster relief in the United States had its origins in the War Department during World War I. James F. Miskel, *Disaster Response and Homeland Security: What Works, What Doesn't* (Westport, CT: Praeger, 2006), 41.

11 Heppard and Green, "Department of Defense Capabilities."

12 Katherine M. Peters and Jason Vest, "Calling in the Cavalry," *Government Executive,* October 1, 2005, www.govexec.com/features/1005-01/1005-01s1.htm. See also Heppard and Green, "Department of Defense Capabilities."

13 Miskel, *Disaster Response and Homeland Security,* 55.

14 See Jeffrey Spears, Brian Robinson, and Ben Gullo, eds. *Domestic Operational Law: 2011 Handbook for Judge Advocates* (Charlottesville, VA: Center for Law and Military Operations, September 1, 2011), 49–50. "However, 10 U.S.C. § 375 directs the Secretary of Defense to promulgate regulations that prohibit direct participation by a member of the Army, Navy, Air Force, or Marine Corps in a search, seizure, arrest, or other similar activity unless participation in such activity by such member is otherwise authorized by law." The Secretary of Defense subsequently prohibited these activities in DoDD 5525.5. As a result, the restrictions placed on Army and Air Force activities through the PCA apply to the Navy and Marine Corps. The PCA does not apply to the Coast Guard unless it is operating under the command and control of the U.S. Department of Defense (DOD), Ibid., 49. Members of the National Guard performing operational support duties, active duty for training, or inactive duty training in a Title 32 duty status are not subject to the PCA. Only when members of the National Guard are in a Title 10 duty status (federal status) are they subject to the PCA. Members of the National Guard also perform additional duties in a State Active Duty (SAD) status and are not subject to PCA in that capacity. Ibid., 50. See also Huckabee, "Partnering with the Department of Defense," 171–172, and Miskel, *Disaster Response and Homeland Security,* 40–56.

15 David E. Sanger, "Bush Wants to Consider Broadening of Military's Powers during Natural Disasters," New York Times. September 27, 2005, www.nytimes.com/2005/09/27/national/nationalspecial/27military.html.

16 Ibid.

17 L. M. Colarusso, "Air Force Told to Pick Up Noble Eagle Costs," *Air Force Times,* February 7, 2005, 1. See also Heppard and Green, "Department of Defense Capabilities."

18 Brookings Institution, *Protecting the American Homeland: A Second Look at How We're Meeting the Challenge, A Brookings Briefing* (Washington, DC: Brookings Institution,2003), www.brookings.edu/events/2003/01/23defense (accessed February 5, 2014).

19 The president issued the declaration to California on the basis of the fires set by rioters. However, it may well have been that President George H. W. Bush did not want to set the precedent of issuing a presidential declaration of major disaster for a civil disturbance. The Los Angeles riots were triggered by a jury decision of innocence for Los Angeles police officers who had been videotaped beating Rodney King during his arrest.

20 Tom Bowman and Siobhan Gorman, "Increasing Military's Role Raises Questions," *Baltimore Sun,* September 20, 2005.

21 Brookings Institution, *Protecting the American Homeland.*

22 Ibid.

23 National Emergency Management Association, *NEMA Profile of State Emergency Management Directors and Their Agencies: Results of FY 2007* (Lexington, KY: National Emergency Management Association, 2007), 4, www.nemaweb.org/?1814.

24 James Lee Witt, "Military Role in Natural Disaster Response," *Disaster Preparedness* 1, no. 1 (Summer 2006), www.wilburforce.edu/cdsp/cdsp_art2_01.html.

25 Civil servants are not trained or compensated to enter danger zones that pose a significant risk to their health and welfare. According to William Cumming, "It is an Occupational Safety and Health criminal law violation to send untrained, unprotected workers into harm's way." William R. Cumming (FEMA, Office of General Counsel,

retired) e-mail to the author, June 2, 2007.

26 "A Guide to Directors of Homeland Security, Emergency Management, and Military Departments in the States and Territories of the United States," (report Prepared by the Federal Research Division, Library of Congress under an Interagency Agreement with the Commission on the National Guard and Reserves, Washington, DC, December 2007), loc.gov/rr/frd/pdf-files/CNGR_Guide-State-Directors-Rev.pdf (accessed October 16, 2013).

27 Ibid.

28 The National Guard is composed of the Army National Guard, the Air National Guard, and reserve military people.

29 Ibid.

30 See The White House, President George W. Bush, "Chapter Four: A Week of Crisis (August 29–September 5)," http://georgewbush-whitehouse.archives.gov/reports/katrina-lessons-learned/chapter4.html (accessed March 2, 2014). Active-duty military and National Guard person-nel provided critical emergency response and security support to the Gulf Coast during the height of the crisis. State active duty and Title 32 National Guard forces that deployed to Louisiana and Mississippi operated under the command of their respective Governors. Title 10 active-duty forces, on the other hand, fell under the command of the President and had more limited civil response authority. On August 30, Deputy Secretary of Defense Gordon England authorized U.S. Northern Command (USNORTHCOM) and the Joint Chiefs of Staff to take all appropriate measures to plan and conduct disaster relief operations in support of FEMA. USNORTHCOM established Joint Task Force Katrina (JTF-Katrina) at Camp Shelby to coordinate the growing military response to the disaster. By September 1, JTF-Katrina, commanded by LTG Honoré, included approximately 3,000 active-duty personnel in the disaster area; within four days, that number climbed to 14,232 active duty personnel. LTG Honoré's leadership, combined with DOD resources, manpower, and advanced planning, contributed to the military's success in the federal response, especially in areas such as search and rescue, security, and logistical support. Ibid.

31 U.S. Army Corps of Engineers, *U.S. Army Corps of Engineers: A Brief History,* www.usace.army.mil/About/History/BriefHistoryoftheCorps/Introduction.aspx (accessed February 5, 2014).

32 Miskel, *Disaster Response and Homeland Security,* 54.

33 Douglas Brinkley, *The Great Deluge: Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast* (New York: Morrow,2006), 196.

34 The U.S. Coast Guard has a long history of involvement in maritime safety and disaster response. For many years the U.S. Coast Guard has behaved as a federal emergency management organization but one with an on-the-water focus. The U.S. Coast Guard has been highly active in matters of port and maritime disaster mitigation, planning, response, and recovery as well as drug interdiction, boater safety, facilitation of marine navigation, port security, border patrol, fisheries regulation, and environmental protection along coasts and waterways.

35 For a time after Hurricane Katrina, Admiral Thad Allen of the U.S. Coast Guard was the FEMA deputy director for Gulf Recovery.

36 David Wood, "National Guard Increases Sandy Response, Sends Reinforcements to NY, NJ," *Huffington Post,* November 1, 2012, www.huffingtonpost.com/2012/11/01/national-guard-sandy-ny-nj_n_2060249.html (accessed October 21, 2013).

37 Ibid.

38 George D. Haddow and Jane A. Bullock, *Introduction to Emergency Management,* 2nd ed. (Boston: Butterworth-Heinemann, 2006), 85.

39 Bowman and Gorman, "Increasing Military's Role Raises Questions."

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Chapter 8. Globalization of Disasters

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Chapter 9. Recovery Assistance

1 The author would like to acknowledge the help of two of his undergraduate students. Jen Richards wrote "The September 11 Victim Compensation Fund: A 'Master Model' for the Future?" in fall 2005 for the author's Politics and Disaster course at the University of Delaware (UD). Also, in the same course and semester, Paul J. Connelly wrote, "The September 11th, 2001 Victim Compensation Fund: The Master Model of Public Policy Compensation Disbursements." Portions of the Richards and Connelly papers, with author permissions, were integrated with a paper this author had written previously; that paper was a summary of Kenneth R. Feinberg's presentation: "The Master Model of Disaster Relief: Use It or Lose It?" (presentation at the National Academies Disasters Roundtable: Law, Science, and Disasters Workshop, Washington, DC, October 18, 2005).

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Chapter 10. Conclusions and the Future

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