Major Terrorism Events and Their U.S. Outcomes (1988-2001)

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EXECUTIVE SUMMARY

This project, which was supported by a SGER grant from the National Science Foundation (NSF Grant # CMS-0231624), was completed by Claire B. Rubin William R. Cumming, Irmak Renda-Tanali, and Thomas A. Birkland. The team used as a starting point the two historic disaster time line charts created by Claire B. Rubin et al: ***The Disaster Time Line (DTL): Selected Milestone Events and Their U.S. Outcomes (1965-2001)***, which includes major natural and industrial/ technological disasters and their outcomes; and ***The Terrorism Time Line (TTL): Selected Milestone Events and their U.S. Outcomes (1988-2001)***, which covers only major terrorist events.

The project team focused on major terrorist events in the past two decades, using the **TTL** as a visual outline and reviewed and documented these events, as well as the essential emergency management (EM) infrastructure - including laws, regulations, practices, expert systems, and organizational changes - that has evolved during that time. This systematic examination of major terrorist events and their outcomes, although limited in scope and duration, provides an explanatory factual foundation that can serve as the basis for policy analyses of the major events and their outcomes for the past two decades.

Since the SGER grant was limited in time and funding, the authors chose to focus on recent terrorist events. The project examined major terrorist events from 1988-2001 in order to accomplish the following: (1) systematically identify and analyze major defining events and document them in a narrative chronology; (2) identify and describe the major outcomes from each defining event; and (3) describe the causal relationships between the events and their major outcomes, to the extent that the information collected allows.

This project identified but did not address the need for a similar research effort regarding the events and outcomes for natural and industrial/technological disaster events in the past few decades, as shown on the DTL. Once that step is taken, then it will be possible to compare and contrast the authorities, programs, plans, and systems used for the three major categories of disasters in the U.S. - natural, industrial/technological, and human-induced. This project also discovered the need to more closely analyze the mutuality of relationships in the homeland security and emergency management arenas. Currently, there is great interest in knowledge transfer from the natural and industrial/technological disaster fields to national defense and homeland security.

As an aside, there is great interest among practitioners in federal agencies in Washington and elsewhere in the time line charts. The **Terrorism Time Line** has been reprinted three times and almost 5,000 copies have been distributed in the past year. Many of the users have expressed interest in obtaining the narrative analysis that is underway.

Findings to Date

Importance of 2001 Events and Outcomes

Although this analysis covers only events and outcomes that occurred through the year 2001, in the background of this report are the profoundly influential outcomes and general unease resulting from the September 11, 2001, terrorist attacks. Concern with national security and homeland security has extended to the nation as a whole as well as to many other countries. Concerns are being raised about the shape of future policies to reduce our nation's vulnerability to terrorism.

The aftermath of the September 11th events provided a sense of urgency and currency to this analysis and also may have indirectly affected the research.

Importance of Selection

The authors are concerned not only with assembling the facts of recent experiences with terrorist events in the U.S., but also with supplying a context for examining and understanding the facts. In order to derive knowledge and practical applications from past events, far more research has to be done, particularly with regard to examining the many outcomes from the September 11th events, and the Anthrax incidents, that occurred during calendar years 2001 and 2002. The definitions and criteria for the selection of "defining" and "focusing" events need to be sharpened and refined. In this regard, the **TTL** served as a graphical table of contents initially. Upon closer examination of events and their outcomes identified in the **TTL**, however, some events in fact were not defining events. It will be necessary to eliminate them from future revisions of the **TTL**.

Measurement of Outcomes

Among the questions and issues for further research are the value, duration, and importance of the outcomes of key defining events. More study is needed to determine a number of issues including:

- if the documented outcomes simply result in corrective actions to deal with disaster-specific problems or needs;
- if some outcomes in fact contributed to improvements in the effectiveness and efficiency of emergency management capabilities; or,
- more importantly, what are the capacity and capabilities of emergency management to deal with future major disasters?

Duration and Importance of Major Outcomes

The need exists for more in-depth analyses of outcomes from major disaster events of all types in order to determine how lasting and significant they were. To what extent were major changes (legislative, regulatory, organizational, or programmatic) merely near-

term "fixes" for problems or are they far-reaching changes that lead to more efficient and/or effective emergency management capabilities?

It would appear that the September 11th attacks led to a significant number of legislative and regulatory actions and were the major contributor to the very comprehensive and ambitious outcome of creating the Department of Homeland Security in November 2002. The September 11th attacks cannot be considered in a vacuum, however. Other efforts undertaken in the wake of attacks or without any obvious trigger provided the groundwork for the ultimate creation of the new department. For example, the Hart-Rudman Commission III report (see Appendix B) recommended that the federal government should create a National Homeland Security Agency.

Next Steps

The project team is well aware that more research and analysis is needed regarding the relative importance, duration, and impacts of many of the major outcomes identified in this report.

In his recent textbook, William Waugh (2000) states that the U.S. emergency management system has largely developed in response to specific major disasters. According to Waugh, *"For the most part, policies and programs have been instituted and implemented in the aftermath of a disaster, based almost solely on that disaster experience, and with little investment in capacity building to deal with the next disaster"* [emphasis added]. He also notes:

> There are increasing political and economic pressures to reduce disaster losses, but there are still political, economic, and social and cultural obstacles to the development of an effective national emergency management system. While there has been more investment in emergency management during the last decade, and capabilities are expanding, much needs to be done to improve the national system. [Waugh, p. 24]

Waugh's book was published in 2000, and since then a great deal of attention, effort, and money has gone into refashioning emergency management for the imminent threats of terrorism in the United States. There is now is more urgency to the needed task of examining and testing the statement above about the lack of long-term outcomes and investment in capacity building.

Is Disaster Policy Always Reactive?

The research team has observed that typically policy is reactive. The **Disaster Time Line** and to a lesser extent the **Terrorism Time Line** display the reactive nature of emergency management, showing that major events are the drivers of changes in legislation, policy, regulation, and organizations dealing with emergency management.

What remains to be examined closely, especially for the years 2001 and forward, is the extent to which outcomes build capacity. It may be that, since the catastrophic events of September 11, 2001, the quantity and quality of outcomes are very different and perhaps more significant than at any previous time. Two new considerations are:

1) Capacity in many realms of emergency management has increased, owing to the high profile of those incidents and the national attention being paid to various public safety and emergency management services, functions, and organizations. Virtually every state has added a homeland security office or set of functions to their emergency management agency, and new resources have been allocated to these areas.

2) Even if capacity is not in fact currently greater, commitment to the issue/need may have increased since September of 2001.

Additional research work is needed to closely examine disaster policies and determine if the September 11, 2001, events and the Anthrax incidents of the same year were in fact major milestones in terms of policy development and if recent changes in national policies regarding emergency management and homeland security have resulted in increased capacity.

It also is important to understand that, while many states have made homeland security an important part of their emergency management agency missions, the extent to which it is displacing the natural and technological disaster function is an important question. Related to this question is the degree to which experience in natural hazards has been leveraged - or ignored - in the new reality of homeland security. For example, the Federal Emergency Management Agency's (FEMA) role in the Department of Homeland security may shift it away from natural disasters and more toward security.

How Significant Were the Outcomes from Major Events in 2001?

For the most part, since this research project was conceived and carried out during 2002, it was not possible to include outcomes from the September 11, 2001, events and the Anthrax incidents (2001) in this report.

As is noted in Part 2 of this paper, both the September 11th attacks and the series of anthrax incidents that occurred in 2001 led to major outcomes in 2002. It would not be surprising if outcomes and ramifications from these events occur for several more years. Preliminary research indicates that a number of highly significant outcomes from those attacks occurred during 2002. They include:

- at least 10 pieces of national legislation;
- two Executive Orders;
- one Homeland Security Decision Directive;
- one new federal department - the Department of Homeland Security; and
- several significant reports.

Given the magnitude of the two sets of terrorist events in 2001, it is no surprise that their outcomes and ramifications would continue for one or more years after the disasters. Although these outcomes have yet to be analyzed collectively, they are likely to have great significance.

Finally, this project identified but did not address the need for a similar research effort regarding the events and outcomes for natural and industrial/technological disaster events in the past few decades, as shown on the **DTL**. Once that step is taken, it will be possible to compare and contrast the authorities, programs, plans, and systems used for all categories of major disasters in the U.S.

PART ONE: PURPOSE AND SCOPE

Background

Since the September 11, 2001, terrorist attacks on the World Trade Center (WTC) and the Pentagon, the field of emergency management (EM) has received unprecedented attention in the U.S. and worldwide. Given the heightened awareness of EM and the major national efforts underway to update, streamline, and expand current EM plans and practices, it is timely and important to document and understand major disaster events and outcomes of the past.

This paper begins the documentation and analysis of the major defining terrorist events and their policy outcomes at the national level for the years 1988-2001. It will review and document these events, as well as the essential EM infrastructure - including laws, regulations, practices, expert systems, and organizational changes - that has evolved. This systematic examination of major terrorist events and their outcomes provides the basis for policy analyses of the major events and their outcomes for the past two decades.

This project, supported by a grant from the National Science Foundation (NSF Grant # CMS-0231624), uses as a starting point the two historic disaster time line charts created by Claire B. Rubin et al:

> **The Disaster Time Line (DTL): Selected Milestone Events and Their U.S. Outcomes (1965-2001)**, which includes major natural and industrial/ technological disasters and their outcomes; and
>
> **The Terrorism Time Line (TTL): Selected Milestone Events and their U.S. Outcomes (1988-2001**), which covers only major terrorist events.

These charts document many of the major defining events in recent years and the laws, regulations, policies, and programs resulting from them. Additionally, the timelines demonstrate some preliminary perceived relationships between disaster events and outcomes. The essential assumption of the **DTL** and the **TTL** is that events and policies are interrelated. However, research is still needed regarding the relative importance of events in setting the policy agenda and in triggering policy change.

This project effort focused on major terrorist events from 1988-2001 in order to accomplish the following:

> Systematically identify and analyze major defining events and document them in a narrative chronology;
>
> Identify and describe the major outcomes from each defining event, including:
> - after-action reports, hearings reports, and studies;
> - legislation, executive orders, and regulations;
> - policies, programs, and organizational changes; and
> - other major changes;
>
> Describe the causal relationships between the events and their major outcomes, to the extent that the information collected allows.

At some future date a similar research effort should be made for the events and outcomes for natural and industrial/technological disaster events in the past few decades, as shown on the **DTL**. Once that step is taken, then it will be possible to compare and contrast the authorities, programs, plans, and systems used for the three major categories of disasters in the U.S. - natural, industrial/technological, and human-induced.

The authors hope that this report will serve several purposes: (a) stimulate thinking by researchers and practitioners; (b) provide a practical and ready set of references; (c) provide a narrative explanation to supplement the **TTL**; and (d) identify long-term research needs. This project focuses on the last 20 years or so of experience, but it is only now that the mutuality of relationships in the homeland security and emergency management arenas is being analyzed and identified. Further, currently there is great interest in knowledge transfer from the natural and industrial/ technological disaster fields to national defense and homeland security.

Terms and Definitions

Various agencies and institution have developed their own definition of many of the terms used frequently in this report, such as emergency management, terrorism, homeland security, and weapons of mass destruction. Below are some representative examples.

Emergency Management

Emergency Management consists of the expert systems that manage people and resources to deal with disasters. For purposes of this paper the term *emergency management* is used to include a range of actions that involve planning for disasters, responding to immediate needs, stimulating the long-term recovery of the affected area, and reducing disaster risks (mitigation) for the future. [1]

Terrorism

From 1980 to 2002, Congress (usually at the behest of the Executive Branch) filled the U.S. Criminal Code with several definitions of "terrorism." Since criminal statutes do not have implementing regulations, these definitions stand on their own merits. Very few states have laws, criminal or civil, that define terrorism, so that federal definitions from any criminal, prosecutable standpoint or administrative standpoint seem to be controlling. FEMA defines terrorism as "the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes."

No one definition of terrorism appears to have gained universal acceptance. Title 22 U.S. C 2656f (d) contains the following definition: The term "terrorism" means premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents, usually intended to influence an audience.

The National Security Institute defines terrorism as: the use of force or violence against persons or property in violation of the criminal laws of the U.S. for purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes. [2]

The Federal Bureau of Investigation (FBI) categorizes terrorism in the U.S. as one of two types - domestic terrorism or international terrorism:

- "Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction."
- "International terrorism involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries." [3]
- Terrorism as "the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives." [4]

Project Definitions

Emergency management: the management of the governmental and nongovernmental preparedness and response at federal, state, and local levels, including non-governmental organizations (NGOs) to unplanned events that affect public, health and safety and destroy property. [See also, ***Preparing for the Unexpected***, Tierney, Lindell, Perry, 2001.]

Terrorism: Executive Order 13223 of September 21, 2002, (See Appendix A) provides one definition that appears to be sufficiently broad to serve as a working definition. Executive orders are signed by the President and usually delegate authority pursuant to statute or interpret a statutory grant of authority by Congress to the President in some implementing statute. In this instance, a variety of statutes were cited as authority for the order and also a number of United Nations Resolutions.

Homeland Security: In July 2002 the Bush Administration provided a definition for this term:

> Homeland Security is a concerted national effort to prevent terrorist attacks within the United States, reduce America's vulnerability to terrorism, and minimize the damage and recover from attacks that do occur.

However, many people are not clear on just what homeland security is and how it is similar to or different from emergency management. Many of the same organizations and people are involved in both endeavors. The recent creation by Pub.L.107-296 of the Department of Homeland Security on November 25, 2002, may clarify the two terms and the two fields of endeavor. In the meantime, people using the terms homeland security and emergency management synonymously only add to the confusion, particularly since homeland security activities usually imply actions broader than those traditionally associated with EM. Indeed, EM has primarily been associated with the response to emergencies by competent authorities; preparedness has long focused on being prepared to respond, while mitigation has only recently become an important part of EM and still is a relatively small part of the EM field.

Weapons of Mass Destruction (WMD): Any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the release, dissemination or impact of: (a) a toxic or poisonous chemical or their precursors; (b) a disease organism; or (c) radiation or radioactivity [50 U.S.C. 2302].

See also the Department of Agriculture regulations (7 CFR Part 121 and Part 331) dealing with the Agricultural Bioterrorism Protection Act of 2002: Listing of Biological Agents and Toxins and Requirements and Procedures for Notification of Possession; Technical Amendment. (Also see the Department of Health and Human Services regulations 42 CFR Part 1003.)

Context for Federal Counter-Terrorism Efforts

Need for Terrorism-Related Research

Until September 11, 2001, the topics of anti-terrorism (usually used to refer to international prevention efforts) and counter-terrorism (used to refer to domestic law enforcement and consequences management) were relatively obscure and only of interest to a relatively small group of specialists. Since then, however, the topic has gained a great deal of notice and notoriety. In an effort to provide the history and context of federal involvement in counter-terrorism, three members of this research team created the **TTL** in late 2001 and revised and reprinted it several times in 2002. The authors quickly became aware that a detailed narrative accompaniment to the graphic would be essential, since the topic of counter-terrorism is not as familiar to most students of emergency management as that of natural and industrial disasters.

This document provides initial documentation and a contextual background for the graphic sequence provided in the **TTL** to provide a basis for documenting and analyzing recent terrorism history. To facilitate additional research by others, the authors have included their reference materials, and additional sources of information.

Consequence Management

With respect to federal government efforts regarding counter-terrorism in recent years, the Government Accounting Office (GAO) provided the following summary in 2001:

Federal programs to prepare for and respond to chemical and biological terrorism attacks operate under an umbrella of various polities and contingency plans. Federal policies on combating terrorism are laid out in the series of presidential directives and implementing guidance. (See GAO- 01-822 for a compendium.) These documents divide the federal response to terrorist attacks into two categories: crisis management and consequence management. Crisis management includes efforts to stop a terrorist attack, arrest terrorists, and gather evidence for criminal prosecution. Crisis management is led by the Department of Justice (DoJ) through the Federal Bureau of Investigation (FBI). All federal agencies and departments, as needed, would support the DoJ and the FBI on-scene commander.

Unlike crisis management, the federal government does not have primary responsibility for consequence management. State and local authorities do. Crisis and consequence management activities may overlap and run concurrently during the emergency response and are dependent upon the nature of the incident. Consequence management includes efforts to provide medical treatment and emergency services, evacuate people from dangerous areas, provide mass care if necessary (shelter, food, medical), detection of agents, monitoring and decontamination, and restore government service. The consequence management activities of the federal government are led by FEMA in support of state and local authorities. [See PDD-39 in Appendix A.]

In a chemical or biological terrorist incident, the federal government would operate under one or more contingency plans. *The U.S. Government Interagency Domestic Terrorism Concept of Operations Plan* [5] establishes conceptual guidelines for assessing and monitoring a developing threat, notifying appropriate agencies concerning the nature of the threat, and deploying necessary advisory and technical resources to assist the lead federal agency in facilitating interdepartmental coordination of crisis and consequence management activities. In the event that the President declared a Presidential emergency under the authority of the Robert T. Stafford Act, Pub.L. 100-707, FEMA until March 1, 2003, then the DHS under Pub.L. 107-296 could coordinate the federal response using the generic disaster contingency plan called the Federal Response Plan (FRP). The FRP has a specific annex for terrorism that outlines the roles of federal agencies in consequence management during terrorist attacks. The plan outlines the planning assumptions, policies, concept of operation, organizational structures, and specific assignment of responsibilities to lead departments and agencies in providing federal assistance. The plan categorizes the types of federal assistance both financial and non-financial into specific "emergency support functions."

In addition, several individual agencies have their own contingency plans or guidance specific to their lead or support activities.

Methodology

Research and Documentation

The initial research and documentation work that went into producing the **TTL** was mainly on experiential and empirical information, based on the several decades of experience in the EM field by Rubin et al. To prepare the chart, use was made of secondary sources and of short, informal discussions with experienced specialists, mainly in the Washington, D.C. area.

This report seeks to expand, refine, and correct the information provided by the **TTL**. For this effort, the authors have relied heavily on secondary sources and on a larger research team that includes a variety of disciplines (public administration, political science, public policy analysis, engineering, and law.) For the most part, documents have included government reports, a variety of commissioned studies (GAO, Presidential Commissions, etc.), and use of periodicals, such as the *Washington Post* and the *New York Times*.

At this time, many after-action reports from the September 11th events are still developing, and analyses will go on for many years.

Selection of Events

The authors of the **TTL** made an initial selection of events that tended to be broad and inclusive. Subsequent research by this project team indicates that in actuality not all events cited in the **TTL** were "defining" or "focusing" events. The team has determined that additional work is needed to review and refine the criteria for selecting such events,

and to produce an in-depth assessment of the significance and long-term important of the outcomes.

At this time, a focusing disaster event is considered to be one whose nature, magnitude, or impacts single it out for special assessment and examination of its causative effects. Some components include:

> **Magnitude**: a major-to-catastrophic size disaster event.
>
> **Hazard or Threat:** an unusual hazard or threat agent in terms of novelty of type, rarity of occurrence, or unusual location of occurrence.
>
> **High visibility or high symbolic value**: monuments in Washington, D.C., for example.
>
> **Location of Incidents**: urban areas or major ports.
>
> **Impacts:** widespread, damaging impacts (physical, social, economic, political, and environmental), possibly in unlikely locations.
>
> **Surprise:** an unlikely event or unexpected outcomes (see also Birkland, 1997).

Magnitude. This seems to be a more significant factor in the case of natural and industrial/technological disasters. On the **DTL**, virtually all of the milestone incidents received either a Presidential Disaster Declaration or received federal attention and assistance by means of the National Contingency Plan. In the **TTL**, not all events are disasters, in part because they fall under different legal categories based on their causative agents.

Nature of the Hazard/Threat. The use of common materials to build the bomb used on the Murrah Federal Building in 1995 and the use of commercial aircraft for the attacks on September 11, 2001, are examples of unusual threat agents.

High Visibility or Symbolic Value. The targeting of the Pentagon, the headquarters of the Department of Defense, on Sept. 11, 2001, is one example. The targeting of the World Trade Center, in the heart of the New York City financial district, is another. Other national symbols, like the White House or the Golden Gate Bridge, are potential targets with high symbolic value.

Location. Tropical Storm Agnes in 1972 was a focusing natural disaster in that it caused historic flood damage to Pennsylvania and New York (both land-locked states). Hence, high impacts in unusual locations may mean less preparedness and a greater likelihood of an ad hoc response and recovery.

Impacts. This would include major impacts - physical, economic, environmental, social and political. The duration of both the events and the impacts are also important elements of a defining disaster event.

Surprise. Surprise was a major factor for both the 1993 World Trade Center bombing, which was accomplished with a truck-delivered bomb, and the 2001 WTC and Pentagon attacks where terrorists used commercial airlines as weapons of mass destruction.

According to James K. Mitchell, who has analyzed "industrial disaster surprises," the term surprise means unprecedented or more precisely: "Nothing quite like them had ever occurred before in the same or similar contexts." [6]

Non-Disaster Milestone Events

In the **TTL** some major events were included in order to provide important elements of context. The "background events" included are termed non-disaster milestone events and designated as such by a special symbol on the chart. Some examples of these are Operation Desert Storm, Kuwait Oil Fires, and the Unabomber attacks. These events will be described in Part Two of this report.

Preview of Part Two

Part Two of this report contains a decade-by-decade summary, from the 1980's through 2001, of the major terrorism events and significant outcomes identified by key actions, authorities, and organizations involved in federal counter-terrorism efforts.

PART TWO: CHRONOLOGY OF EVENTS

Introduction

This chronology details by decade the major milestone events and their outcomes in the U.S. from the 1970s to 2001. These events are analyzed in terms of the following:

Milestone Incidents/Events
Outcomes
- Major Reports and Documents
- Statutes
- Executive Orders and Directives
- Key Federal Plans
- Organizational Changes

- Other Department/Agency Actions
- Legislation

It should be noted that this cascading sequence was selected carefully, based on several years of research, first with the **Disaster Time Line (DTL)** and then on the **Terrorism Time Line (TTL)**. It is an empirically determined sequence of outcomes.

Milestone Events Included in Report

Although some of the events discussed do not specifically involve terrorist activity within or against the U.S., their outcomes and effects on the U.S. warrant inclusion in this analysis. The specific milestone events covered in this report are:

1984	Salad Bar Poisoning in The Dalles, Oregon
1988	Bombing of Pam American Flight 103
1989	Exxon Valdez Oil Spill
1990 to 1992	Operation Desert Storm and the Kuwait Oil Fires
1993	World Trade Center Bombing
1995	Sarin Gas Attack on Tokyo Subway
1996	Bombing of the Murrah Federal Office Building in Oklahoma City
1996	Crash of Trans World Airlines Flight 800
1996	Bombing Incident at Atlanta Olympics
2001	September 11 Terrorist Attacks on World Trade Center and Pentagon

Executive Orders and National Security Decision Directives (NSDDs)

Appendix A contains details and analysis of all of the Executive Orders and NSDDs referenced in the report.

The Seventies

For the most part, major terrorist incidents and federal legislation and other authorities have occurred since 1988. However, some significant actions were taken before 1988,. Before the creation of Federal Emergency Management Agency (FEMA) in 1979, more than 100 federal agencies and organizations administered emergency and disaster related polices and programs. Several important laws, systems, and plans were already in place at the federal level when FEMA was created. These include:

1974 - Federal Disaster Relief Act of 1974, P.L. 93- 288.

1977 - Congress conducted numerous hearings about the coordination of federal emergency assistance programs. Congress later suspended the efforts when President Carter began to review the issue.

June 1978 - President Carter submitted to Congress "Reorganization Plan Number 3" to establish FEMA. After congressional approval, on April 1, 1979 the Reorganization Plan creating FEMA took effect. (See also Executive Order 12127; 44 FR 19367, April 3, 1979.)

July 1979 - E.O. 12148: Federal Emergency Management, 44 FR 43239. This amended a large number of earlier Executive Orders, details of which can be obtained from the National Archives website (http://www.nara.gov). This executive order is significant because it transferred functions previously delegated to other departments and agencies to FEMA for coordination of federal emergency management activities. Also, the Director of FEMA was delegated authority to establish federal policies for and to coordinate all civil defense and civil emergency planning, management, mitigation, and assistance functions of executive agencies. FEMA was assigned the lead responsibility for response to consequences of terrorism.

Additional details about the formation of FEMA and the reasons for its creation are available on FEMA's website: http://www.fema.gov/about/history.shtm.

The Eighties: Milestone Events

1984 - Salad Bar Poisoning in The Dalles, Oregon

Description of Event

A community-wide outbreak of Salmonella gastroenteritis occurred in September and October 1984, resulting in a total of at least 751 cases. The results of epidemiological studies implicated eating from salad bars in 10 restaurants in the area. The Ranjneeshee religious cult, headquartered 40 miles (65 km) south of The Dalles, Oregon, had contaminated salad bars in local restaurants with Salmonella bacteria to prevent people from voting in a county election, thereby, it was hoped, allowing the cult's chosen candidates to win a bitterly contested election. Although no one died, several hundred people became ill from food-borne illness.

Although bioterrorism was considered a possibility when public health officials investigated the outbreak, it was considered unlikely until the FBI stepped in and conducted further investigations. The nearly 7,000 members of the Rajneeshee religious cult had incorporated their 100 square mile (262 km2) commune as a city with its own police force and stockpile of weapons. They had already won a majority of the seats on the city council of nearby Antelope and had hoped to incapacitate non-cult member

voters so that their own members would win two of the three Wasco County judgeships and the sheriff's office in the county elections. The subsequent criminal investigation revealed that members of this Rajneeshee religious cult planned to infect residents with Salmonella on Election Day to influence the results of county elections.

The cult members originally had planned to contaminate The Dalles' water supply. In order to practice for the attack by contaminating the salad bars at 10 local restaurants with S. Typhimurium. Residents suspected the cult members were behind the poisonings and went to polls in groups to make sure the cult did not win any county positions. The episode spread fear in The Dalles and drained the town's economy.[7]

Significance

Although this is not a well-known event, it is significant because it was the first bio-terrorism attack in the U.S.—even though it was not recognized as such immediately. This event revealed a new threat in the use of infectious agents as weapons by terrorists in order to further a personal or political agenda. This salad bar poisoning incident fits the current definition of terrorism, because the poisoning was done to influence public policy. Little national attention was given to the salmonella poisoning in 1984 and the years immediately following the incident, largely because it occurred in a remote town and was perpetrated by a fanatical fringe group. It was assumed that such an incident would never happen again. However, although there were no fatalities, this outbreak may still hold the record for a bio-terrorism event, sickening the largest number of people to date. This event demonstrates how bioterrorist attacks can be used to incapacitate people, rather than kill or permanently injure them.

1988 - Bombing of Pan Am Flight 103

Description of Event

On December 21, 1988, Pan Am Flight 103 was en route from London to New York, when it suddenly exploded. The plane crashed to the ground near the city of Lockerbie, Scotland, killing all 259 people on board, along with 11 people on the ground, and destroying buildings around the crash area. Investigations by a British investigating flight commission found that the crash was probably due to an intentional exploding device aboard the plane. Evidence of an explosion was found in the luggage compartment. The investigation found that the luggage on the plane belonged to passengers boarding in Frankfurt and London, along with suitcases that were transferred from Air Malta flight 180 to Pan Am 103 in the Frankfurt airport.

Because the plane and 189 of the passengers were American, and the 11 killed on the ground were British citizens, both British and American governments became involved in the investigations. During the aftermath of investigations, the U.S. and the British governments and experts developed various theories linking the source of the incident to a terrorist organization based in a Middle Eastern country. Given the lack of clear

evidence, the incident lost much of its media appeal, and only a small specialized force of investigators continued looking for clues to the perpetrators of this terrorist act. [8]

After this incident, on August 14, 1989 President George H.W. Bush issued Executive Order (E.O.) 12686, which formed the Presidential Commission on Aviation Security and Terrorism. Although the mandate of the commission was to investigate how the tragedy took place and not who was responsible, the commission called for "zero tolerance" policy, including preparation for "preemptive retaliatory military strikes against terrorist enclaves in nations that harbor them." [9]

In November 1991 a Grand Jury of the United States District Court for the District of Columbia issued an indictment charging two Libyan nationals and on the same day the Lord Advocate of Scotland announced the issue of warrants for their arrest. Under the guidelines of Interpol and other international agencies, the two Libyan citizens were arrested and detained by Libyan police. [10]

A UN Security Council Resolution subsequently demanded that Libya take steps to end its state-sponsored terrorism. The resolution also required that Libya accept responsibility for the bombing, disclose all evidence related to it, pay appropriate compensation, and cease all forms of terrorism. The UN Security Council subsequently adopted Resolution 748 in March 1992, but Libya's continued defiance of the resolutions led the Security Council to adopt Resolution 883 in November 1993, which imposed a limited assets freeze and oil technology embargo on Libya and significantly tightened up existing sanctions. Although the Libyan regime made some cosmetic changes to its terrorism apparatus immediately following the adoption of Resolutions 731 and 748, for years it made no further attempts to dismantle its broad-based terrorism network. [11]

Although the level of concern with aviation safety was high both in the U.S. and abroad after the Pan Am 103 attack, change was incremental, not sweeping. On November 16, 1990, nearly two years after the attack, President Bush signed the Aviation Security Improvement Act of 1990 (P.L. 101-604, 104 Stat. 3066). Details of this legislation are provided in Appendix A.

Significance

About seven months after the incident, reacting to organized pressure from the families of the victims, in August 1989, President George H. W. Bush formed a seven-member Presidential Commission on Aviation Security and Terrorism. In May 1990 the commission presented its findings in a 182-page report, stating that there were serious flaws in the aviation security system, beginning with security flaws within the Pan Am airport terminals at Frankfurt and London, and the FAA's failure to enforce its rules. The same commission recommended a top-to-bottom revamping of the U.S. government's airline security apparatus. It recommended that a new assistant secretary of transportation for security and intelligence be created to oversee aviation safety and that a federal security manager be created at each major airport. The former recommendation was enacted in the Aviation Security Improvement Act, as noted above. In the end, the

Aviation Security Improvement Act was an incremental change, focusing on organizational changes and predicated on a belief that terrorism against civil aviation was more a foreign problem than a problem that would happen in the United States.

Exxon Valdez Oil Spill (March 24, 1989)

Description of Event

At 12:04 am Alaska Time on March 24, 1989, the Exxon Valdez, carrying 1.25 million barrels of North Slope (Alaska) crude oil ran aground in Prince William Sound in the Gulf of Alaska, spilling 11 million gallons (42 million liters) of crude oil. This was the largest oil spill in U.S. history. The resulting slick covered more than 1,000 miles (1,600 km) of the Alaska coastline and caused an estimated $3 to $15 billion in environmental damages. The spill killed hundreds of thousands of fish, seabirds, and thousands of other wildlife.[12] The environmental impact of the spill was thought to be substantial, although the exact magnitude of the spill's effects is still unknown, because there was little baseline information about the Prince William Sound ecosystem that would serve as a benchmark.[13]

In March 1989 the state of Alaska brought a criminal indictment against the tanker's captain, Joseph J. Hazelwood, for his role in the disaster, [14] but in March 1990 he was acquitted of the most serious criminal charges against him. In September 1994, a federal court jury ordered Exxon Corporation to pay $5 billion in punitive damages to Alaskan fishermen, natives, and property owners. [15] The fine was reported to be the highest punitive award ever levied against a corporation and also the largest ever in an environmental pollution case. Disputes over the extent of the damage and the success of Exxon's cleanup efforts continued for several years after the spill.[16] 10 In late 2002, after the U.S. Ninth Circuit Court of Appeals ordered the Federal court in Alaska to reduce the punitive damage award, Judge Holland of the Alaska court returned with a figure of $4 billion, an amount still disputed by Exxon Mobil. [17]

Significance

Although the Exxon Valdez oil spill was an accident and not a terrorist event, it is a defining event in emergency management history because it revealed enormous weaknesses in the federal emergency preparedness and response systems. This revelation triggered new procedures, organizations, and legislation that dramatically changed the emergency management system in the U.S. [18] The State of Alaska, the U.S. Coast Guard, NOAA, General Accounting Office (GAO), and the Congress conducted several hearings, reports, and analyses. The 1989 GAO study determined that the government should assume control of future disasters of this type and magnitude. These reports, studies, and hearings - coupled with the substantial public outcry and interest group mobilization after the spill - triggered the enactment of the Oil Pollution Act of 1990 (OPA-90) Pub.L. 101-380, which in turn lead to the creation of a more formal and expanded infrastructure for the National Response System, a subsequent revision of the National Contingency Plan, and the signing of the Federal Response Plan in 1992. The

transition from dealing with spills that were intentional or malicious to those that had terrorist intent on the part of the two major response agencies, U.S. EPA and the U.S. Cost Guard, remains to be examined and documented.

The Eighties: Outcomes

Major Documents and Reports

For at least two years after the Exxon Valdez Oil Spill, a large number of after-action and other reports were prepared. Additionally, EPA prepared a report that for the first time provided an extensive compilation of authorities for hazardous material responses.

Report of the Presidential Commission on Aviation Safety and Terrorism (United States. President's Commission on Aviation Security and Terrorism, 1990). This was a report dealing with the Pan Am Flight #103 bombing incident of 1988. This Commission was authorized by E.O. 12686. (See Appendix A.)

Statues

The Robert T. Stafford Disaster Relief and Emergency Assistance Act - November, 22, 1988. This was an important legislative milestone because it amended the Disaster Relief Act of 1974, PL 93-288. When FEMA was created by Reorganization Plan No. 3 of 1978 (USC section 901), the Disaster Relief Act of 1974 was delegated to the Director of FEMA by Executive Order 12148 of July 15, 1979. Because both the DRA of l974 and the Stafford Act vested authority directly in the President and not the Director of FEMA, some form of updated delegation was required. That delegation was made in E.O. 12673 of March 1989, 3 CFR 1989, comp. p. 214. The E.O. was entitled "Delegation of Disaster Relief and Emergency Assistance Functions." Stafford Act delegations are from the President, and any new delegation will now account for the creation of the Department of Homeland Security on November 25, 2002, by Pub.L.107-296. (For additional details see Appendix A)

Executive Orders and Directives (See Appendix A for detailed information)

Executive Order 12656 - November 18, 1988: Assignment of Emergency Preparedness Responsibilities 53 FR 47491; November 23, 1988. This revoked EO 10421, December 31, 1952; E.O. 11490, October 28, 1969. It was amended by E.O. 13074 on February 9, 1998 and by E.O. 13228 on October 8, 2001. This Executive Order defines a national security emergency as any occurrence that seriously degrades or threatens the national security of the United States. Terrorist incidents were not specifically mentioned except for DoJ responsibilities. The National Security Council was assigned responsibility for developing and administering this policy. Also, the Director of FEMA will assist in the implementation of and management of national security emergency preparedness policy by coordinating with other federal departments. FEMA is also responsible for coordinating, supporting, developing, and implementing national security emergency preparedness programs, domestic emergency functions, and

mutual civil-military support, among other things. The full text is available at http://www.fas.org/irp/offdocs/EO12656.htm.

Executive Order 12657 - November 18, 1988: Emergency Preparedness Planning at Commercial Nuclear Power Plants. Provides for FEMA assistance in emergency preparedness planning at commercial nuclear power plants. 53 FR 47513; November 23, 1988. The full text of this executive order is available at http://envirotext.eh.doe.gov/data/eos/reagan/19881118a.html. This E.O. allows FEMA to initially respond in coordinating federal response activities when advance state and local commitments (i.e., response planning) are absent or inadequate. FEMA is authorized to assume any necessary command-and-control function, or delegate such function to another federal agency, in the event that no competent state and local authority is available to perform such function.

E.O. 12673 (March 23, 1989): Delegates Stafford Act authority with some exceptions (principally declarations) to Director of FEMA. (See Appendix A for more details.)

Other Department/Agency Actions

January 19, 1988: Memorandum from the Domestic Policy Council approved by the Attorney General states that terrorism is an assigned responsibility of the Department of Justice except for civil response activities.

September 14, 1988: Director FEMA approves the memorandum "FEMA' s Role in Technological Emergencies," which assigned responsibilities within the Agency.

The Nineties: Milestone Events

Operation Desert Storm, Operation Desert Shield, and the Kuwait Oil Fires (1990-2)

Description of Event

Operation Desert Shield/Storm was the code name given to the military operation also known as the Persian Gulf War that was conducted against the Iraqi army by the United States and its allies from August 1990 to February 1991. The crisis began when fellow Arab Gulf States failed to endorse the Iraqi leader Saddam Hussein's call to cut oil production and increase oil prices. Iraq had incurred substantial debt due to its decade-long war with Iran. The Gulf States' failure to act on oil prices raised Hussein's enmity with the other states.[19] After weeks of gathering Iraqi troops along the Iraq-Kuwait border and accusing Kuwait of various acts, including "slant drilling" into Iraqi oil fields, Iraq invaded Kuwait on August 2, 1990. On August 8, 1990, President Bush announced a major deployment of U.S. forces to Saudi Arabia to take up defensive positions against a potential Iraqi attack. Eventually 30 nations joined the military coalition against Iraq, with an additional 18 countries supplying economic, humanitarian, or other assistance. On January 17, 1991, when it became clear that Iraq would not withdraw from Kuwait,

Desert Shield became Desert Storm. The ensuing air war, ground war, and the subsequent economic embargo decimated Iraq's military infrastructure, severed communication and supply lines and destroyed weapons arsenals. [20]

The attack on Kuwait by Iraq caused the United Nations Security Council to pass several resolutions to shut off Iraq from international trade. The Security Council called upon Hussein to remove his troops from Kuwait and to destroy his non-conventional weapons. Following the Gulf War, Iraq was forced to disclose its chemical and biological weapons programs, to admit that it had had acquired missiles with the intent of it to attack neighboring countries (in particular, Israel) with these weapons, and had tried to develop a nuclear bomb. In the cease fire of 1991, Saddam Hussein agreed unconditionally to give up his weapons of mass destruction. Much information about Iraq's weapons of mass destruction is in the public domain from UN reports and from Iraqi defectors. (See for example Issue Brief for Congress at http://www.fas.org/man/crs/IB92117.pdf by Katzman, last updated July 5, 2002.)

According to these sources Iraq is believed to be a threat by continuing to develop and possess, since 1991, chemical and biological agents, as well as weapons produced before the Gulf War. Under a series of UN Security Council resolutions, Iraq is obliged to destroy its holdings of these weapons under the supervision of UN inspectors. [21] A UN sponsored inspection regime followed the war, but the inspectors left Iraq in the face of apparent Iraqi intransigence. A new inspection regime was created in late 2002, and inspectors began to revisit Iraqi weapons sites in November and December 2002.

Operation Desert Storm and the findings of the UN WMD inspection teams in Iraq have created a sense among some members of the international community, particularly Britain and the U.S. that Iraq, by continuing to possess nuclear and biological weapons in breach of international law, is a threat to the world, to the U.S. and to its strategic allies. Attention to Iraq was further heightened by the September 11, 2001 attacks on the U.S. Some officials believed there might be a link between Iraq and the attack, but such a link has so far not been established.

Significance

This is one of the non-disaster milestone events included as part of the context for understanding various actions taken in the U.S. to counter terrorism.

After these events, and as noted in the findings of the UN Weapons of Mass Destruction (WMD) inspection teams, it was found that Iraq, by continuing to possess nuclear and biological weapons in breach of international law, is a threat to the world, to the U.S. and to its strategic allies. The situation triggered the preparation and the enactment of the 1996 Nunn-Lugar-Domenici Act regarding WMD (Title XIV of Pub.L. 104-201).[22]

Kuwait Oil Fires (1991-1992)

Description of Event

On January 22, 1991, Iraqi forces set two Kuwaiti oil refineries ablaze and then, immediately before the coalition's ground troop attacks, ignited the rest. Saddam hoped that the smoke would inhibit the operation of the coalition air forces and the movement of ground troops. Iraq's destruction of Kuwait oil production facilities devastated the Kuwait economy and created a major environmental disaster.[23]

A Presidential Memorandum gave the Environmental Protection Agency (EPA) the assignment to lead U.S. efforts to assess and mitigate the Kuwaiti oil fires. This was the first foreign assessment effort for EPA.

World Trade Center Bombing - February 26, 1993

Description of Event

On February 26, 1993, an explosion in the parking garage of the World Trade Center (WTC) in New York City killed six people and wounded 1,042. The explosion left a crater 200 by 100 feet wide (about 61 by 30.5 meters) and five stories deep. The damage was estimated to be $500 million. Until the Center's destruction on September 11, 2001, the WTC was the second largest building complex in the world and housed 100,000 workers and visitors each day.

FBI and the New York Police Department (NYPD) investigators determined that the source of the blast was a vehicle parked at the B-2 level garage of the WTC and loaded with about 1,200 pounds (544 kg) of explosives. The rental truck in which the bomb was placed was traced to Mohammed Salameh, a Palestinian with Jordanian citizenship. Salameh's arrest led investigators to his accomplices, Arabs of different nationalities. All were followers of radical Egyptian cleric Omar Abd al-Rahman. Ramzi Yousef, the mastermind of the attack, had fled the U.S. and was not apprehended until 1995. Yousef's collaborators were arrested shortly after the bombing. [24] In March 1994, they were convicted for their roles in the bombing, and each received a 240-year prison term and a $500,000 fine.

On February 7, 1995, Yousef, a “Top Ten” fugitive, was arrested in Pakistan and was then turned over to the FBI. [25] Yousef was convicted on all counts of conspiracy to commit acts of terrorism worldwide on September 5, 1996 and was sentenced in 1997. [26]

Significance

This was the first attempt by foreign terrorists to destroy the World Trade Center, and the weapon chosen was a truck laden with explosives. The explosives-filled truck was also the weapon used against the Murrah Federal Building in Oklahoma City, which initially led to suspicion of Middle Eastern terrorism, rather than of domestic perpetrators.

According to a recent Joint Inquiry Staff Statement (Hill 2002), the lack of a state sponsor for the terrorist attack on the WTC bombing, together with the mixture of nationalities involved in the various other plots, initially confused U.S. investigators.

Over time, however, the intelligence community realized that a new phenomenon was emerging - radical Islamic cells, not linked to any country, but united in anti-American zeal. [27]

This first World Trade Center attack led to the expansion of the Joint Terrorism Task Forces to other cities and led to the inclusion of Central Intelligence Agency (CIA) officers in several task forces. It also lead to structural and fireproofing changes to the building. Further, as was learned in 2001, many businesses initiated or enhanced their business continuity plans.

This attack also revealed the possible vulnerability of important symbols of American or western technology, politics, business or culture. The choice of the World Trade Center as a target was widely believed to have been made based on the symbolic value of the WTC complex, a theory borne out by the substantial symbolic value of the 2001 attack on the WTC and the Pentagon.

Sarin Gas Attack on Tokyo, Japan Subway (March 20, 1995)

Description of Event

The Tokyo Underground (subway) is comprised of 130 miles (230 km) of track and transports millions of people daily. On March 20, 1995, members of the Aum Shinrikyo cult placed open canisters containing a liquefied version of the nerve gas sarin on five separate cars on three different subway lines in Tokyo. As the sarin vaporized, it spread through the subway cars and affected thousands of commuters. The attack was carried out at virtually the same moment on five different trains that were converging on the center of Tokyo. By the end of the day, 15 subway stations in the world's busiest subway system had been affected. Twelve people were killed in the attacks, and as many as 3,800 were injured, of which nearly 1,000 were hospitalized. [28]

Within 48 hours of the subway attack, police raided Aum Shinrikyo facilities throughout Japan, which included a moderate-scale chemical weapons production facility, designed by cult engineers, and stocked with first-rate equipment purchased over-the-counter. Although the cult was skillful at recruiting scientists and engineers, most of the cult members were young and largely inexperienced.

According to a 1999 Centers for Disease Control (CDC) report by Kyle Olson, the cult facility was designed to produce sarin, “not on a small terrorist scale, but in nearly battlefield quantities: thousands of kilograms a year.” The same report indicated that Aum also had cultured and experimented with biological agents, such as botulin toxin, anthrax, cholera, and Q fever. The cult subsequently attempted several apparently unsuccessful acts of biological terrorism in Japan between 1990 and 1995.

The subway attack was the most deadly assault in an ongoing campaign of terror waged by this mysterious cult. The objective of the Tokyo subway attack was to kill as many policemen as possible because Aum Shinrikyo had become aware of police plans to

conduct raids against cult facilities. Unable to achieve their objective of political power through legitimate means, they determined that a preemptive strike was necessary (Olson 1999).

In the days and weeks immediately following the gas attack, more than 200 key members of the cult were arrested. Approximately 120 are still in jail, on trial, or have been convicted. [29]

Significance

The Tokyo Subway sarin gas attacks gained attention in Japan, the U.S., and other nations, by revealing the need to prepare for biochemical terrorism and weapons of mass destruction in general. The attack demonstrated how terrorist groups could recruit scientists, obtain deadly chemical or biological agents, and put plans into action to kill or disable people in pursuit of their causes. This event had a profound influence on the 1996 Nunn-Lugar-Domenici Act. Consequently in 1997, the Terrorism Incident Annex to the Federal Response Plan was adopted by FEMA.

Bombing of the Murrah Federal Building in Oklahoma City - April 19, 1995

Description of Event

At 9:02 a.m. Central Time on April 19, 1995, a truck bomb ripped away the entire façade of the nine-story Alfred P. Murrah Federal Building in downtown Oklahoma City, Oklahoma, killing 169 citizens, including 19 children, and injuring more than 500 people. The powerful blast left a 30 foot (9.1 m) wide, 8 feet (2.4 m) deep crater on the front of the building, and blast effects ranged over nearly 30 blocks, blowing out windows, heavily damaging a dozen buildings, and causing damage to almost 400 more. The damage to the building was estimated in the hundreds of millions, and it was torn down after the attacks.

In the immediate aftermath of the bombing, local responders, fire fighters, police force, Urban Search and Rescue (USAR) Teams rushed to the scene. Within seven hours of the explosion, the president ordered the deployment of local, state and federal government resources to aid in search, rescue, and recovery.

The local and federal investigators were able to recover a piece of axle and a license plate believed to have been part of the rental truck used in the bombing. (The vehicle identification number on an axle found at the 1993 WTC attack had led to the apprehension of that bombing's perpetrators.) Soon after, the investigators tracked the license plate and the axle to a rental truck and were given the description and the address of the two men who rented it. The address was the home of James Douglas Nichols and Terry Lynn Nichols, and interviews with neighbors revealed that the Nichols brothers and a friend of theirs, Timothy McVeigh, had “experimented with explosives, using household items to produce small bombs using bottles and cardboard cartons, which they would detonate on their property for fun.” According to some witnesses, McVeigh, a

veteran of Desert Storm, professed extreme right-wing political views, was particularly agitated over the deaths of the Branch Davidians in Waco, Texas in April 1993. FBI was told that McVeigh expressed extreme anger towards the Federal Government and that James Nichols had "repeatedly blamed the U.S. government for all the problems in the world." Federal agents decided they had enough evidence to arrest James Nichols, and to put out a warrant on his brother Terry. Also based on the composite sketches derived from eyewitness accounts at the scene and at the truck rental company, McVeigh was definitely identified as the other suspect. Coincidentally, during the same day, Timothy McVeigh was arrested by a patrol officer on a highway near Perry, Oklahoma, for carrying a concealed weapon, driving without tags, and without insurance. Within 48 hours, with a series of successful investigations, the perpetrators were tracked down and arrested.

Timothy McVeigh and Terry Nichols were indicted and convicted for the bombing. McVeigh was convicted on 11 counts of murder and conspiracy, including using a weapon of mass destruction and conspiracy to use a weapon of mass destruction, and was sentenced to death. McVeigh was executed on June 11, 2001. Terry Nichols was convicted of conspiracy to use a weapon of mass destruction and eight counts of involuntary manslaughter. He received a life sentence.

Within seven hours of the explosion President Clinton signed an emergency declaration. This was the first use of the President's authority under the Stafford Act to "self-initiate" an emergency declaration for emergencies with federal involvement. It was also the first time section 501(b) of the Stafford Act, granting FEMA the primary federal responsibility for responding to a domestic consequence management incident, was used. The President subsequently declared a major disaster on April 26, 1995.

Several after action reports and accounts (see for example http://www.9-1-1magazine.com/magazine/OKCitySpecial/00schapelhouman/index.html and http://www.app1.fema.gov/okc95/okcref.htm) indicated the importance of preparedness at all levels (mainly local, then state and federal) at all times. Several additions were made to the Federal Response Plan to address specifics of dealing with terrorist events.

Significance

At the time, federal authorities called the bombing "the deadliest terrorist event ever committed on U.S. soil." The event was a great shock for the American public and for government officials. The shock was compounded by the unlikely location of Oklahoma City's federal building, a rather nondescript structure largely devoid of any great symbolic significance. The home-grown nature of the attack was also surprising to many in government, who like much of the public had been conditioned to believe that mass terrorism incidents were more likely the work of foreign, anti-American (most likely Arab or Islamic) elements than of domestic forces. Indeed, suspicion almost immediately turned to Arabs or Palestinians, and news accounts of the disaster compared it to the "routine" violence of Beirut and, in particular, to the methods used in the 1993 WTC attack. The rapid apprehension of McVeigh helped nip these assumptions in the bud.

The Oklahoma City bombing was an unprecedented attack because it occured in the "heartland", and was planned by Americans rather than by foreign nationals. Before this attack, the few experts and others who concerned themselves with terrorism were mostly foreign policy or security specialists. After the attack, others, including those trained in and expert in disaster response, became more involved in this field.

Attack on U.S. Barracks - Khobar Towers, Saudi Arabia (June 26, 1996)

Description of Event

On June 26, 1996, a massive blast occurred at the U.S. compound called Khobar Towers, a military facility in Dhahran, Saudi Arabia, killing 19 Americans and wounding 500 people, including Saudi nationals. The U.S. controlled portion of Khobar Towers was a facility housing U.S. Air Force, U.S. Army, and British and French allied forces supporting the coalition air operation over Iraq, Operation Southern Watch. The perpetrators were a group of Saudi Shi'a Muslim terrorists, who detonated a truck bomb containing 5,000 to 20,000 pounds (2,273 to 9,091 kg) of explosives on the perimeter of the complex.

Although the truck did not pass through the base's perimeter security, the bomb's large size, which surprised U.S. officials, led to a massive explosion that destroyed much of the complex. Following the attack, the United States redeployed its forces to more remote parts of the Saudi Kingdom. According to a U.S. indictment brought in June 200l, the Saudi Hezbollah carried out the attack, with support from Iran. The indictment stated that Iran and its surrogate, the Lebanese Hezbollah, recruited and trained the bombers, helped direct their surveillance, and assisted in planning the attack. [30]

Significance

Although this event did not take place on U.S. soil it was a terrorist attack aimed at U.S. citizens. Although not yet known for certain, it would appear that the 1993 WTC bombing, this event, and some subsequent events were early Al Qaeda initiated attacks on the U.S.

Crash of TWA Flight 800 off Long Island, New York (July 16, 1996)

Description of Event

On the evening of July 16, 1996, TWA flight 800 departed New York's Kennedy Airport en route to Paris, with 212 passengers and 17 crewmembers. Minutes after departure, contact with the aircraft was lost as the plane passed though 13,000 feet. At that point the aircraft exploded. Witnesses reported seeing a fireball, and pilots nearby observed wreckage falling from the sky. Some witnesses reported seeking streaks of light reaching from the ocean to the sky, which fueled speculation that a missile brought down the plane. A search and rescue effort was immediately mounted, but it soon became clear that there were no survivors of the explosion and crash.

While the cause of the explosion was not immediately known, and some government officials-particularly those in the National Transportation Safety Board (NTSB) warned against premature speculation about the cause of the accident, the immediate reaction was to assume that TWA 800 was bombed. Indeed, the FBI took immediate control of the investigation because the plane crashed due to an explosion, and no other reason for the plane's demise could be found. The flight data and voice records, recovered from the ocean floor after a difficult search, revealed no definitive evidence pointing to a crash or a bomb.

Sensitivity to terrorism was heightened in the U.S. due to a number of factors, including trials of the attackers of the World Trade Center in 1993, the Khobar Towers attacks, and the upcoming Atlanta Olympics. On July 19, the *New York Times* reported that "Federal law enforcement officials said yesterday that the most likely explanation for the fiery crash of T.W.A. Flight 800 was that a bomb or, perhaps, a missile sent the airplane plunging into the Atlantic Ocean off Long Island on Wednesday night, killing all 230 people on board."

Months of investigation ensued, with the investigation proceeding from the presumption, but not certainty, that the plane had brought down with an explosive device. Media coverage of the event and the high profile of the FBI in this case (with concomitant tensions with the NTSB) fueled speculation that the event was a terrorist act. An early finding that explosives residue was found on the wreckage seemed to be promising evidence of a bombing, until it was revealed that material similar to explosives had been placed on the plane in earlier training exercises for explosives-sniffing dogs.

In the end, the NTSB determined, based on an analysis of the wreckage and a lack of physical evidence of terrorism, that the plane had exploded as a result of the ignition of fuel vapors contained in the center fuel tank under the fuselage. The cause of the ignition was not definitively determined, but was believed to have been a spark from uninsulated wires leading to a fuel level probe in the tank, or, less likely, due to static electricity. Conspiracy theories continue to surround the accident, however, many of which revolve around the idea than an errant U.S. Navy missile brought the plane down, and that the post-crash investigation was a cover-up.

Regardless of the cause, the event looked so much like terrorism that several policy responses followed, as outlined below. It is also important to note that this was the second high-profile aviation accident in 1996, following the May 1996 crash of ValuJet flight 592 into the Everglades after it departed Miami. Aviation safety and security were therefore already higher on the media, legislative, and executive branch agendas than they might otherwise have been.

Significance

This event, which resulted in the total destruction of an otherwise sound aircraft in flight, soon after take off, appeared so much like the Pan Am 103 bombing and other attacks against commercial aviation that many believed this crash was the result of a terrorist act.

Ultimately, the NTSB determined that an explosion in the plane's center fuel tank, which was nearly empty and full of volatile fumes, brought down the craft, shortly after the flight departed from JFK airport.

Immediate policy responses addressed the seeming likelihood that the plane was intentionally brought down. Conspiracy theories notwithstanding, in the end the NTSB ascertained that the destruction of TWA 800 was not caused by a terrorist bomb, an errant missile, or any other intentional act.

Atlanta Olympics Incident - July 27, 1996

Description of Event

At 1:20 a.m. Eastern Time on July 27, 1996, a pipe bomb exploded at Centennial Olympic Park, in Atlanta, Georgia, a major attraction of the Olympic Games, where thousands of visitors had gathered on the ninth day of the 1996 Summer Olympics. Although the local 911 system had received a telephone call warning of the impending bombing at 12:58 a.m., the warning did not allow sufficient time to locate and defuse the bomb. One person was killed, and a Turkish cameraman suffered a fatal heart attack subsequent to the blast. In addition, the blast injured 112 people. Investigators determined that the bomb had been placed under a bench. Before the bombing at Centennial Olympic Park, no successful terrorist attack had been launched at an international sporting event since the 1972 attack at the Olympics in Munich, Germany, which resulted in the deaths of 11 Israeli athletes. [31]

After the incident, agents on the Southeast Bomb Task Force, comprised of the FBI, the ATF, the GBI, the Alabama Bureau of Investigation, the Birmingham Police Department, and prosecutors from the Justice Department, interviewed thousands of witnesses and traced nearly every component of the bomb. Many other state and local law enforcement agencies assisted the Task Force's investigation. On October 14, 1998, the Justice Department charged that Eric Robert Rudolph, a then 32 year carpenter from North Carolina was responsible for the bombing at Atlanta's Centennial Olympic Park, as well as the 1997 bombings at an Atlanta area health clinic and a nightclub. [32] When charges were filed against him, Rudolph was still at large. In May 1998, the FBI placed Rudolph on the "top 10 fugitive list." [33] His whereabouts are still unknown as of early 2003.

Significance

The Atlanta Olympics incident was a driving force in Senator Sam Nunn's (D-GA) efforts to legislate enhanced preparedness against terrorism, particularly employment of weapons of mass destruction (WMD). This was accomplished, in part, by adoption of Title XIV of the Defense Authorization Act of 1996, P.L. 104-201. Title XIV was captioned "The Defense Against Weapons of Mass Destruction Act."

Bombings of U.S. Embassies in Kenya and Tanzania - August 7, 1998

Description of Event

On August 7, 1998, two massive explosions occurred at the U.S. Embassies in Nairobi, Kenya and Dar Es Salaam, Tanzania. The attacks, less than ten minutes apart, destroyed the facilities, killing 12 Americans and over 250 Kenyans and Tanzanians. More than 5,000 people were injured, many of whom were permanently blinded.

U.S. officials had already gathered convincing evidence implicating Osama bin Laden in the bombings. On August 20, 1998, the U.S. launched missile strikes against training bases in Afghanistan used by extremist groups affiliated with bin Laden. Local security forces detained several lower-level perpetrators. Others were caught, leading to important confessions and resulting in the prosecution of four persons in the United States for their role in the bombings. However, several of those who authorized and helped orchestrate the bombings fled to Afghanistan or otherwise did not face justice. [34]

During the August 1996 retaliatory attacks, a plant that Sudanese officials claimed was a pharmaceutical plant because U.S. officials believed it produced nerve gas. Perl (1998) argues that, in countering terrorism, this was the first time that U.S. policymakers shifted their focus towards a more proactive and global policy and were less constrained about targeting specifically the terrorists, their bases, and their infrastructure. [35]

Attack on U.S.S. Cole, Yemen - October 12, 2000

Description of Event

On October 12, 2000, an explosion occurred on the destroyer U.S.S. Cole docked at the harbor in Aden, Yemen, killing 17 sailors and wounding 39 more. The cause of the explosion was the detonation of explosives placed in a small fishing boat located next to the destroyer at that time. This bombing was the first terrorist attack on a U.S. naval warship.

Soon after the investigations, it was determined that again the terrorist group Al-Qaida, led by Osama Bin Laden, was behind this operation and that preparations for the attack had begun as early as 1998. Al-Qaida had planned an attack on another U.S. Navy warship before the Cole bombing, but that plot had failed since the terrorist boat sank. After the Cole bombing, the leading perpetrators fled Yemen, leaving only low-level, rather less skilled members behind. In the past, Yemeni Islamic radicals had fought against Soviet forces in Afghanistan, and Yemen was known to be a safe heaven for several Islamic radical groups, including Al- Qaida. [36]

After the attack on U.S.S. Cole, the Department of Defense subordinated its terrorism analysis capability under the Joint Chief of Staff/Intelligence (J2), which has overall responsibility for warning in the Department of Defense. This reduced confusion and clarified responsibility for warning.

Outcomes in the 1990s: 1990-1994

Statutes

November 16, 1990. P.L. 101-604; Aviation Security Improvement Act of 1990. This legislation, which was passed in the aftermath of the 1988 Pan Am 103 attack, contained two titles. Title I contained the most important aviation security provisions, including establishing a DOT Director of Intelligence and Security, a Federal Aviation Administration (FAA) Assistant Administrator for Civil Aviation Security, Federal Security Managers at U.S. airports, and Foreign Security Liaison Officers at foreign airports. The bill also required the FAA to require employment investigations or security arrangements for persons having access to air carriers and security areas in U.S. airports, required the FAA and FBI to assess threats to airport security, and directs the FAA to expand Research and Development programs on methods to counteract terrorism against civil aviation. Such R&D efforts included systems to detect explosives in baggage. In terms of intelligence gathering, the legislation required persons receiving information on threats to airliners to provide information to specified officials and directs FAA to order the cancellation of flights whose safety cannot be ensured.

Title II of the act provided for Department of State programs to help families of victims of terrorism abroad and to press for security improvements overseas under the Foreign Airport Security Act.

The Oil Pollution Act of 1990, Pub. L. 101-380. This significant piece of legislation has been the major foundation stone for authority, programs, plans, and actions by EPA and the Coast Guard with respect to oil spills. (See Appendix A for details.)

November 1994: Section 3412 of the "National Defense Authorization Act for Fiscal Year 1995" (P.L. 103-337) repealed the Federal Civil Defense Act of 1950. Section 3411 creates a new Title VI of the Stafford Act, which restates the authorities in the Civil Defense Act in the Stafford Act. This new Title VI establishes that it is the policy of the Federal government that FEMA provide necessary direction, coordination, guidance, and assistance, as authorized in the Title so that a comprehensive emergency preparedness system exists for all hazards in the U.S. FEMA is directed to: (1) prepare federal response plans and programs for the emergency preparedness of the United States, and (2) sponsor and direct such plans and programs to coordinate such plans and programs with State efforts.

The FEMA Director may request such 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 U.S. Interstate Emergency Preparedness Compacts are authorized to: (a) assist and encourage the States to negotiate and enter into interstate emergency preparedness compacts; (b) facilitate uniformity between state compacts and consistency with federal emergency response plans and programs; (c) assist and coordinate the activities under State compacts; and (d) aid and assist reciprocal State emergency preparedness legislation which will permit mutual aid

in the event of a hazard which cannot be adequately met or controlled by a State or political subdivision thereof. P.L. 103-337 amended P.L. 100-707 that previously amended P.L. 93-288.

Executive Orders and Directives

June 3, 1994: E.O. 12919- National Defense Industrial Resources Preparedness (http://www.fas.org/irp/offdocs/eo12919.htm) delegates authorities and addresses national defense industrial resource policies and programs under the Defense Production Act of 1950, as amended, except for the amendments to Title III of the Act in the Energy Security Act of 1980 and excludes telecommunication authorities under Executive Order No.12472.

Under this order, the FEMA Director:

> Serves as an advisor to the National Security Council on issues of national security resource preparedness and on the use of the authorities and functions delegated by this order;
>
> Provides for the central coordination of the plans and programs incident to authorities and functions delegated under this order, and provides guidance and procedures approved by the Assistant to the President for National Security Affairs to the federal departments and agencies under this order;
>
> Establishes procedures, in consultation with federal departments and agencies assigned functions under this order, to resolve in a timely and effective manner conflicts and issues that may arise in implementing the authorities and functions delegated under this order; and
>
> Reports to the President periodically concerning all program activities conducted pursuant to this order. [See also 15 CFR Part 700.]

Department/Agency Actions

January 24, 1991: In an agency memo, FEMA Director Wallace E. Stickney stated, "I have determined that the Federal Response Plan for Natural Disasters will be used [for national security emergencies] if needed."

Over the course of the fall of 1990, Director Stickney had systematically received briefings from FEMA staff, and held table top exercises (no actual movement of personnel or materials) to basic learn the emergency management and response system as it then existed. Those briefings and exercises, often involving both high-level political appointees and career officials, but never from outside FEMA, were filled with confusion and lack of detail. A simple reason for this confusion and lack of detail existed. Very few political appointees or career officials understood all the plans and response systems that FEMA has either promulgated or signed onto through unfunded Memoranda of

Understanding (MOU) or funded Memoranda of Agreement (MOA). Now, for the first time in its history, the U.S. was faced with Iraqi sympathizers or nationals retaliating with domestic terrorist attacks.

It should be stated that no formal threat assessment or warning was issued to the civil agencies, state or local governments or the general public or the civilian response community. In fact despite general knowledge that such attacks were possible, even if not directly threatened, FEMA was instructed by the staff of the National Security Council not to even discuss possible attacks. Although the Federal Civil Defense Act of 1950 (Pub.L. 81-920) had contained authority for the Administrator to declare a "Civil Defense Emergency" that authority lapsed in 1974.

The context of planning in FEMA in 1990 must be understood as the source of the confusion and lack of clarity. First, the civil National Security community had lived and died bureaucratically by planning for contingencies that would hopefully never occur. Various kinds of exercises, usually table-tops, concerned themselves with various contingencies. In the 1980's FEMA had participated with the Department of Defense (DOD) in large-scale mobilization exercises, such as Rex-Alpha and Bravo (1982 and 1984) and paid for it bureaucratically when various organizations sued FEMA to learn the details of what was alleged to be a secret government. Second, the HAZMAT's community pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) issued originally through agency mandates and then pursuant to E.O. 12316 of August 14, 1981 (now E.O. 12580, as amended) had undergone real life situations requiring actual deployment and response. Even as late as December 1993, however, in a report to Congress, EPA identified continued confusion and overlaps in federal HAZMAT planning and response. See "A Review of Federal Authorities for Hazardous Materials Accident Safety," December 1993 (EPA 550-R-93-002).

By November 23, 1988, when the Robert T. Stafford Disaster Relief Act, Pub.L. 100-707, had been signed, a Federal Response Plan for a Catastrophic Earthquake had been agreed to by all agencies in November 1987. The plan had been mandated by the Earthquake Hazards Reduction Act of 1977. This plan was the last major civil plan to contain a law-enforcement section, because after that date the Department of Justice refused to agree to inclusion of any law enforcement annex where the plan arguably did not have the Attorney General as the lead. See for example, discussion of the National System for Emergency Coordination issued by the Domestic Policy Council in January 1988.

Additionally, there was the Federal Radiological Emergency Response Plan (FRERP) promulgated pursuant to E.O. 12241, which by its own terms addressed terrorism. This plan had been published in 1985 and was last updated in 1996. It should be noted that NRC, DOE, and FEMA had signed an MOU in 1981 on radiological incident/event response that still exists, even though arguably conflicting with the FRERP.

It is interesting to note that as early as 1982, in NSD 47, the National Security Council had attempted to facilitate a single domestic response system. That this issue still persists

in evidenced by language in the National Strategy for Homeland Security issued in July 2002.

Four days before Desert Storm, trying to reconcile the planning confusion, Director Stickney issued a memorandum for all FEMA employees on January 24, 1991, mandating that the Federal Response Plan (for Public Law 93-288, as amended) would be used to support state and local response plans. This was the first use of the term Federal Response Plan. Deep within the bureaucracy, the Earthquake Response Plan had evolved into the Natural Hazards Response Plan and now became the Federal Response Plan (initially issued in 1992). The formal adoption of the Federal Response Plan finally occurred in 1995. Documentation of planning and response confusion in FEMA in 1992 (even before Hurricane Andrew in August 1992) is evidenced in reports issued by the FEMA Inspector General.

April 1992: FEMA issues the Federal Response Plan, in order to establish a process and structure for the systematic, coordinated, and effective delivery of Federal assistance to address the consequences of any major disaster or emergency declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended. (Full text is available at http://www.app1.fema.gov/library/stafact.htm.)

Legislation

November 30, 1993: P.L. 103-160 is the National Defense Authorization Act for Fiscal Year 1994. Section 1704 of this bill, entitled "Sense of Congress concerning Federal emergency planning for response to terrorist threats," reads as follows:

It is the sense of Congress that the President should strengthen Federal interagency emergency planning by the Federal Emergency Management Agency and other appropriate Federal, State and local agencies for development of a capability for early detection and warning of and response to: (1) potential terrorist use of chemical or biological agents or weapons, and (2) emergencies or natural disasters involving industrial chemicals or the widespread outbreak of disease

Such "sense of the Congress" provisions do not carry the full weight of law, but they indicate that Congress has concluded that the executive branch should take action in a particular direction. And FEMA took this seriously by creating the National Security Steering Group (NSSG). See Appendix A for more detail.

January 1994: National Security Steering Group (NSSG), chaired by FEMA's National Security Coordinator, was established to serve as the focal point for intra-agency and interagency coordination of national security-related activities and to ensure that national security matters are integrated into FEMA's overall "all-hazards" approach to emergency management. In his July 3, 1996 memorandum to Associate Directors, Administrators, Inspectors General and Office Directors, FEMA Director James L. Witt added the Office of Policy and Regional Operations and the Information Technology Services Directorate to NSSG.

April 1994: Memorandum of Understanding was signed between FBI/National Security Division and FEMA/Director of State and Local Programs to assist with the assignment of the roles and responsibilities of each agency during a terrorist or criminal-related nuclear incident.

Outcomes in the 1990s: 1994 - 2000

Major Reports/Documents

February 12, 1997: White House Commission on Aviation Safety and Security (Gore Commission) issued its report to the President, consisting of four chapters and a total of 56 recommendations. 32 Of the recommendations, Chapter 3 is the largest section, with 30 recommendations relating to aviation security. Recommendation 3.1 is that "The federal government should consider aviation security as a national security issue, and provide substantial funding for capital improvements," a sentiment again offered after September 11, 2001. Other recommendations echoed those that have been made in various forums since the crash of Pan Am 103, including baggage matching, better passenger screening performance, and explosives detection.

March 5, 1997: General Accounting Office. Aviation Safety and Security Challenges to Implementing the Recommendations of the White House Commission on Aviation Safety and Security. In testimony to Congress, Gerald L. Dillingham, Associate Director, Transportation Issues at GAO, testifies that the Gore Commission's recommendations are a good start, but that substantial questions remain as to who will implement the recommendations, how much they will cost, and who will pay for them.

April 24, 1998: General Accounting Office, Aviation Security: Implementation of Recommendations Is Under Way, But Completion Will Take Several Years. GAO argues that FAA has been generally slow to act on the Gore Commission's recommendations, although GAO acknowledges that implementation is hampered in part by the rulemaking process and by technological challenges.

Executive Orders and Directives

E.O. 13015, August 22, 1996. Establishes a "White House Commission on Aviation Safety and Security," to provide recommendations on aviation safety (including air traffic control) and security.

Other Department/Agency Actions

FAA: December 8, 1997. FAA press release lists 15 actions taken by FAA regarding center wing tanks in Boeing 747 aircraft. While the release calls the crash "still unexplained," all 15 actions relate to center wing tank (CWT) explosions. In addition, two airworthiness directives (ADs) were issued regarding fuel issues; these do not relate to terrorism. In the end, about 40 ADs were issued relating to wiring, short circuits, and

fuel tanks. None of these ADs relate to terrorist acts, suggesting that little evidence of terrorism had been found by NTSB or FAA by late 1997.

August 23, 2000. National Transportation Safety Board: Aircraft Accident Report: In-flight Breakup Over the Atlantic Ocean, Trans World Airlines Flight 800, Boeing 747-131, N93119, Near East Moriches, New York, July 17, 1996. The NTSB concluded that the loss of flight 800 was due to an explosion in the CWT. In Section 2.3.1 of the report, the Board evaluated the possibility of an explosion in the CWT caused by lightning, meteorite, "a missile fragment," static electricity, and several other causes related to the fuel system. All these alternative explanations were rejected. None of the NTSB's recommendations related to aviation security or terrorism, but focused on issues relating to the possibility of CWT explosions in fuel vapors

Legislation

October 9, 1996. H.R. 3539, PL 104-264. Title: Federal Aviation Reauthorization Act of 1996, etc.

Introduced 5/29/96, passed 10/9/96. This is omnibus legislation that reacts to a number of aviation issues. This legislation repealed FAA's mandate to promote airline travel, leaving its mission focused on regulation, primarily that related to safety. Reacting to the TWA 800 accident and other incidents, the legislation established standards for screening passengers, bomb detection, employee background checks, passenger profiling, baggage matching, and cargo screening. However, many of these provisions were not fully implemented.

December 16, 1997, H.R. 2476 (related S. 1196), PL 105-148. Title: To amend title 49, U.S. Code, to require the National Transportation Safety Board and individual foreign air carriers to address the needs of families of passengers involved in aircraft accidents involving foreign air carriers.

This bill reacted to continued concerns about Pan Am 103, TWA 800, and, in particular, the needs of air disaster survivors whose loved ones were lost in accidents and terrorist events. This legislation requires DOT and the NTSB to establish systems to quickly inform families of the fate of loved ones on foreign carriers, including establishing toll-free hot lines, notifying families promptly, and other services.

March 4, 1999. H. 1000 (10 related bills), P.L. 106-181. Title: To amend title 49, U.S. Code, to reauthorize programs of the Federal Aviation Administration, and for other purposes.

CRS Summary via THOMAS (http://thomas.loc.gov) (Key provisions only).

(Sec. 134) Directs the Secretary to carry out not less than one project to test and evaluate innovative aviation security systems and related technology to improve security at U.S. public airports. Authorizes appropriations.

(Sec. 508) Amends the Pilot Records Improvement Act to require an employment investigation (including a criminal history check) in the case of passenger, baggage, or property screening at airports if the Administrator of the FAA decides it is necessary to ensure air transportation security.

Declares that an air carrier does not need to obtain the employment records of an applicant pilot who has been employed by a branch of the U.S. armed forces, the National Guard, or reserve before allowing such individual to begin service as a pilot.

Provides for electronic access to the employment records of FAA air pilots.

(Sec. 511) Subjects to a civil penalty of up to $25,000 any individual who physically assaults (or threatens to assault) a member of the flight crew or cabin crew of a civil aircraft, or any other individual on the aircraft, or who takes any action that poses an imminent threat to the safety of the aircraft or other individuals on the aircraft. [This reacts to air rage incidents.]

(Sec. 512) Authorizes the attorney general to deputize state and local law enforcement officers having jurisdiction over airports as Deputy U.S. Marshals in order to enforce federal security laws on board aircraft, including laws relating to violent, abusive, or disruptive behavior by air passengers.

November 22, 2000. S.2440, P.L. 106-528. Title: Airport Security Improvement Act of 2000.

Directs the Administrator of the Federal Aviation Administration (FAA) to develop an electronic fingerprint transmission pilot project for individual criminal history record checks into an aviation industry-wide program. Exempts any airport, air carrier, or screening company from participating in such program if they determine it would not be cost effective and notify the Administrator of such determination.

(Sec. 2) Amends federal aviation law to require that a criminal history record check (fingerprint check) be done for any individual applying for a position as a security screener, a screener supervisor, or that will allow unescorted access to an aircraft or a secured area of an airport. Allows such persons during the first three years to work temporarily without a fingerprint check (provided such fingerprints have been submitted and an employment investigation has found no cause for suspicion) for 45 days during the first two years of such a three-year period, and for 30 days during the third year of such period. Requires all new employees, after the temporary periods, to have a fingerprint check before beginning work. Declares that an employment investigation shall not be required for an individual if a criminal history record check is completed before the individual begins working. Sets forth specified exceptions to the requirements of this Act.

Lists additional crimes in the past ten years preceding an employment investigation for which an individual will be barred from employment in a position as a security screener or a position that will allow unescorted access.

(Sec. 3) Directs the Administrator to issue a final rule on the certification of screening companies.

Establishes new minimum standards for the training of security screeners.

Directs the Administrator to work with air carriers and airports to ensure that computer-based training facilities intended for use by security screeners at an airport are conveniently located and easily accessible.

(Sec. 4) Requires each airport operator, air carrier, and security screening company to include a list of sanctions published by the Administrator in its security program for use as guidelines in the discipline of its employees for infractions of airport access control requirements. Requires the Administrator to work with airport operators and air carriers to improve airport access controls by January 31, 2001.

(Sec. 5) Directs the Administrator to take certain actions to ensure physical security at FAA staffed facilities that house air traffic control systems. Requires the Administrator to report to specified congressional committees on progress made in improving the physical security of air traffic control facilities, including the percentage of such facilities that have been granted physical security accreditation.

(Sec. 6) Directs the Administrator to issue an amendment to air carrier security programs to require a manual process which that that will increase the number of checked bags that are selected for screening by explosive detection systems.

(Sec. 7) Amends the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century to require the Secretary of Transportation to enter into an agreement with the National Academy of Sciences (currently, the General Accounting Office) to conduct a certain airport noise study. Requires the National Academy of Sciences to report the results of such study to the Secretary.

Authorizes appropriations.

(Sec. 8) Revises the total number of members of the Federal Aviation Management Advisory Council.

The Year 2000 and Beyond: Milestone Events

Y2K: Ability of Computers to Handle the Date Rollover in the New Century

Description of Event [37]

Since the Y2K threat did not result in a disaster, interest in the event is based on the unique characteristics of preparation and response that may be instructive and useful for future technological threats and crises. Among the unique features of the threat event were:

> Y2K was the first threat for which a precise date of occurrence was known, although the questions about what and where were not known.
>
> Y2K was the first situation for which emergency managers in all 50 states and the U.S. territories were all operational simultaneously, and were in direct communication with FEMA, in anticipation of a single source threat.
>
> A new organization, the Interagency Coordination Council (ICC) was created to oversee the federal effort. The ICC was considered to have effectively coordinated a broad variety of both public and private agencies, which was a significant accomplishment.
>
> Enduring lessons were learned and benefits derived from the remediation experience. In many cases, IT infrastructure and mechanisms were modernized.
>
> Y2K led to a heightened awareness and knowledge among executive-level managers of the important and vulnerabilities of information technology. Critical infrastructure protections gained a higher ranking among the mission priorities of corporate and government executives.
>
> New public/private partnerships and more effective avenues of communication - domestically and internationally-were created that should be beneficial in addressing future IT challenges.[38]
>
> The Y2K Act, Pub.L. 106-31, July 20, 1999, limited liability for software manufacturers and vendors fixing the problem.

Significance

In fact the Y2K issue was a major threat, but not a disaster. The U.S. spent about $100 billion ($8.5 billion of which was spent by the federal government) on the Y2K problem. According to federal officials, among the reasons the date rollover went smoothly were (a) an unprecedented level of effort undertaken by organizations in all sectors; (b) the sharing of information, with a focus on supplier interrelationships; and (c) attention to contingency planning.

According to the Senate Committee on the Year 2000 Technology Problem, “the threat was very real and the risk and consequences of inaction were too dire to justify a lesser effort. Even considering the enormous amount of time and money spend on Y2K, the level of success is till remarkable considering that the U.S. - with one-fourth of the world's computer assets - is the most technically dependent nation on earth.”

The ICC, which was abolished in spring of 2001, provided a useful organizational model for later federal efforts to deal with terrorism.

Legislation

The Disaster Mitigation Act of 2000. PL 106-390, Oct. 20, 2000 According to FEMA,[39] this act provides an impetus for state and local governments to undertake mitigation planning. The Act does not mandate that terrorism or technological disasters to be address in hazard mitigation planning; however, it does encourage and reward state and local pre-disaster planning and promote sustainability as a strategy for reducing the effects of disasters. Naturally, this objective can only be fully achieved through incorporating not only natural hazards but also the full spectrum of human-caused disasters. Interim final regulations on hazard mitigation planning were published in the Federal Register on Feb 26, 2002 (see 44 CFR Parts 201 and 206).

Analyst's Note. Both the interim regulations and the planning guidance were issued in 2002. Since this report covers events and outcomes only through 2001, as of that time this act was administered to apply only to natural hazards.

Year 2001 - Milestone Incidents and Events

September 11, 2001 Terrorism Attacks

Description of Event [40]

At 8:45 a.m. Eastern Time on Tuesday, September 11, American Airlines flight 11 was hijacked by a group of terrorists after taking off from Boston. The terrorists deliberately flew the aircraft into the north tower of New York's World Trade Center (WTC) complex. The initial reaction to the accident was based on incomplete information - the size of the aircraft, the reason it crashed, and the severity of the damage to the North Tower were all unknown. At 9:03 a.m. a second plane, United Airlines flight 175 from Boston, struck the south tower of the World Trade Center. This second crash, seen by millions on live television and replayed repeatedly throughout the day, seemed obviously intentional and made clear the size of the planes involved in the attacks. By 9:30 a.m., President Bush had already called the crashes part of an "apparent terrorist attack."

During the period between the first and second crashes in NYC, the Washington Area Airport Authority had begun evacuating Reagan National, Baltimore Washington (BWI) and Dulles airports as a precaution. Immediately after the second crash, the Federal Aviation Administration (FAA) issued a national "ground stop," which prevented all civil flights taking off, thereby acknowledging that these actions were deliberate and that more attacks might be underway.

The roads were being closed in Washington, D.C., and the mayor had just given the order to evacuate the city of Washington, D.C. when at 9:40 a.m. American Airlines flight 77, a Boeing 757 out of Newark, N.J., struck the Pentagon in Arlington, Virginia. The FAA

issued an immediate order that all the planes flying in U.S. airspace were to land immediately; international flights approaching the U.S. were diverted to Canadian airports. The news spread quickly through blanket media coverage that a fourth plane was heading towards Washington, D.C. with the expectation that it was aiming for the Congress or quite possibly the White House. The decision to evacuate the White House occurred around 9:45 a.m.

At about 10:00 a.m. the fourth commercial plane, United Airlines flight 92 out of Newark, crashed in Somerset County, Pennsylvania, about 80 miles (130 km) southeast of Pittsburgh. About the same time a partial collapse occurred at the Pentagon building in the area of impact. At 10:05 a.m. the south tower of the World Center collapsed, following by the collapse of the north tower at 10:28 a.m. At approximately 5:30 p.m. a third tower in the World Trade Center complex, Building 7, also collapsed. Building 7's demise was entirely due to fires inside the building that broke out as debris from the twin towers showered down on it and neighboring buildings. WTC 7's collapse was the first ever collapse of a modern steel frame building due solely to fire damage. The fire was likely fed by diesel fuel tanks in the building, which had been installed to power generators for the New York City OEM's emergency operations center. This center was rapidly evacuated after the attacks, and OEM reestablished operations on the West Side of Manhattan.

Significance

These attacks were extraordinarily well planned and coordinated. They exploited well-known and long-standing weaknesses in American immigration and aviation security policies. The terrorists' goal was clearly to damage the symbols of power in the U.S., causing as many casualties as possible, and spreading fear. Also, by hitting at the World Trade Center Complex in New York City, which is the heart of the international financial community, there is no doubt that the terrorists hoped for long-term negative economic consequences.

The local, state, and federal responses were immediate, and massive amounts of resources were deployed to the attack sites. Initially, it was estimated that the casualties in the WTC might be as high as 10,000, with 800 fatalities in the Pentagon incident. Ultimately, the death count was fewer than 3,000 people at the WTC and fewer than 300 at the Pentagon. The toll at the WTC was lower than had been feared, but the total toll still stands as the most deadly single terrorist attack in the world and among the worst disasters, natural or human, in U.S. history. Beyond the immediate toll, many millions of people all across the country felt that the New York and Washington attacks revealed that they too were potential targets, especially those living in other large cities.

The rapidly unfolding events of September 11 raised concerns for the President's and other officials' safety. Within hours, measures were taken to ensure the continuity of the government, to avoid mass panic, and to protect the nation and its citizens from further attacks.

Anthrax Incidents (October 2001 and following)

Description of Events

The first case of the anthrax exposure was reported on October 4, 2001, in Boca Raton, Florida, and subsequently West Palm Beach, Florida. At these sites, the initial responders were local health and public safety personnel, who established incident command protocols and quickly coordinated support from state and federal responders, with the FBI acting as lead federal agency. The one anthrax-related death in New York City has not been linked to any local site of contamination, and the nature of the contamination at NBC's offices, at the New York Post, and the Mayor's office has not been well documented. Their occurrences in the immediate aftermath of the WTC disaster most likely resulted in decreased involvement by response agencies.

During 2001, anthrax contamination was detected in 21 postal facilities around the country, 20 Congressional buildings in the District, 11 government buildings in Maryland/Virginia, and 6 other facilities around the country. The anthrax attacks affected citizens in Connecticut, Florida, Indiana, Maryland, Missouri, New Jersey, New York, North Carolina, Virginia, and Washington, D.C. All of these incidents were similar in scope. Members of the Congress and the media appear to have been the major targets, due to their visibility. The contamination of United States Postal Service (USPS) facilities, and the death of two postal workers, was possibly incidental to the attack; the envelopes released Anthrax spores during mail handling. The biological attacks were narrowly targeted indicating that a small-scale bio-terrorism attack can have far-reaching outcomes and ramifications. The assessments at the USPS facilities were conducted by federal interagency teams led by Federal Bureau of Investigation (FBI), the U.S. Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC).

Incidents in Washington, D.C. Anthrax was initially detected in the Hart Senate Building when a letter was opened in Senator Daschle's office. From the discovery of this initial letter, through the assessment and remediation process, this response was under the control of the Capitol Hill Police Board (CHPB). Additional organizations that responded to the Senate Building were EPA, CDC, and the U.S. Department of Defense (DoD). All of these organizations that responded acted under the command of the CHPB, under the direction of the Sergeant of Arms of the Senate. The remediation project was primarily funded and managed by EPA, using the Superfund Trust Fund, with promise of reimbursement by Congress. Involvement of local agencies was limited to providing support functions and law enforcement logistical support.

One distinctive feature about these events is the delivery mechanism for the anthrax powder. The mail service was used as the vehicle to spread the anthrax spores to specific locations throughout the U.S. There were 21 postal facilities contaminated by anthrax, including the major distribution centers at Brentwood in Washington D.C., and in Hamilton Township near Trenton, NJ. USPS behaves more like a private company in its actual operations management, maintaining a high degree of confidentiality and limiting its coordination with other local, state, and community organizations. As a federal

executive agency, the USPS has CERCLA authority to manage non-emergency situations at its facilities, with other federal agencies, such as CDC and EPA, providing support at USPS request. State and local coordination by the USPS is primarily limited to traffic control, security issues related to the fumigation phase of the remediation effort, and coordination for purposes of improving relations to the surrounding communities. The vast majority of individuals exposed to anthrax have been USPS workers at the facilities. Medical assessments and treatments have been managed within the USPS system, with the assistance of CDC. The Brentwood mail facility remains closed, with plans for determining the appropriate remedial action for this site.

Significance

As documented earlier, the terrorist attacks of September 11, 2001, focused national, state and local attention on preparations for further potential terrorist attacks. Less than one month after these attacks, a series of anthrax incidents severely tested the ability of the national health and emergency management system to deal with bio-terrorism. A set of incidents in several states involving anthrax-tainted letters ultimately caused the deaths of five people, infected 18, and led to about 30,000 people being put on antibiotics during Fall 2001. These incidents were the first significant, multi-state biological attack in the U.S.

These biological attacks on the nation affected not only our government, but also revealed the challenges and shortcomings facing the nation's public health system. To date, the U.S. had not experienced an attack of this magnitude.

As this writing, the perpetrators of these incidents have not yet been found and brought to justice, and, the authorities, at least publicly, have not acknowledged that they are any closer to finding the perpetrators. Knowing who the perpetrators are and their motives will no doubt be useful information in preventing future events of this type. Since the incidents occurred in late 2001, many of the remediation and clean up efforts as well as changes in regulations, policies, and practices are ongoing, and future analyses of these efforts will be needed.

Ramifications of the Anthrax Events in 2001. Two incident management issues will be of special interest for further research:

> The federal Concept of Operations Plan (CONPLAN) for responses to terrorist attacks was not used. Under the CONPLAN, the FBI and FEMA play major roles as the lead agencies for crisis management and consequence management, respectively. The 2001 anthrax incident responses generally did not follow the CONPLAN model. Although the FBI was very heavily involved in the source letter investigations, and at the sites where the letters were found, at most of the other sites, the FBI did not exercise its crisis management authorities.
>
> FEMA was not involved. FEMA did not play a role in the consequence management aspects of the responses, and the Federal Response Plan was never

activated. The rationale for this position was that most of the impacts of the incidents were on federally owned and managed facilities and on federal employees, hence, there was no compelling need to activate the plan to provide federal assistance to state and local agencies. This raises important questions regarding the role of the public health system in the U.S. in dealing with biological terrorism.

Outcomes in 2000 and Beyond

Major Reports and Documents

After examining dozens of major natural disaster events during the years 1965-2001, the authors noted that immediately after a major event, either the Congress or the White House initiated hearings, after-action reports, and/or studies to determine what the problems and deficiencies were in responding adequately to disaster events. This step occurred without exception in the 36 years examined. Yet in less than a week after the September 11th events, major national legislation was enacted and organizational changes occurred. There were two highly unusual aspects in the immediate aftermath of the terrorist attacks: (1) no hearings or studies were ordered to determine what went wrong and what remedies were needed, and (2) the speed and bipartisan nature of the legislative process were unprecedented.

The authors noted the sequence with great interest because it was an aberration from the pattern observed since 1965. After making a rough time line chart of the sequence, the authors surmised that, because several major reports about terrorism had already been completed before September 11th, they were used rather than ordering new studies and reports. Some relevant ones that were quickly updated and issued are: several GAO reports on counter-terrorism and on protecting critical infrastructure; Hart/Rudman Reports I & II, Gilmore Reports I & II, and the National Commission of Terrorism (Bremer Commission) Report. (See Appendix B.)

It would appear that the information and knowledge about what to do already existed before September 11th. What was lacking was the political backing for change and the political will to act. A rapid sequence of actions regarding improved emergency management and protection of critical infrastructure then followed.

Additional Reports

During the roughly 18 months before the September 11th attacks, many major studies and reports dealing with terrorism were completed. These reports were done in the last two years of f the Clinton Administration.

These reports are very important, in terms of anticipating problems and also recommending organizational changes, such as the formation of a homeland security agency. While this report cannot perform a full analysis of each, a listing of the major reports and a brief accounting of their contents are included in Appendix B of this report.

The President's Commission on Critical Infrastructure Protection (the Marsh Commission) was the first national effort to address the vulnerabilities created in the new information age. The Commission, established in July 1996 by Presidential Executive Order 13010, was tasked with formulating a comprehensive national strategy for protecting the infrastructures we all depend on from physical and "cyber" threats.

For their reports and other information, visit the Critical Infrastructure Assurance Office's (CAIO) website, at http://www.ciao.gov.

Executive Orders and Directives

Again, within about 16 weeks, three Executive Orders (E.O.) and two Homeland Security Presidential Directives (HSPD) were issued. They include: E.O. 13228, Homeland Security, E.O. 13231 Critical Infrastructure Protection, and E.O. 13234 Citizen Preparedness. HSPD1 deals with the Homeland Security Council and HSPD 2 covers Immigration Policies.

Homeland Security Presidential Directives

In October 2001, the White House created a new category of directive, called the Homeland Security Presidential Directive (HSPD). Two were issued during 2001:

> **Homeland Security Presidential Directive #1**: Homeland Security Council [41]
>
> **Homeland Security Presidential Directive #2**: Combating Terror Through Immigration Policies [42]

Executive Order 13228 (October 8, 2001). Establishing the Office of Homeland Security and the Homeland Security Council. This E.O. amended E.O. 12656.

Executive Order 13231 (October 16, 2001). Critical Infrastructure Protection in the Information Age. This E.O. revoked E.O. 13130 (July 1999).

Legislation

In a matter of about 16 weeks after the terrorist events, the unprecedented degree of national attention and commitment to dealing with the outcome of the incidents led to the rapid enactment of four major pieces of legislation: the Supplemental Act for Response and Recovery, the USA Patriot Act of 2001, the Defense Authorization Act, and the Aviation and Transportation Security Act.

Other unusual characteristics of the aftermath of this disaster are the speed with which the federal government and the NY state delegation met and agreed to create and pass congressional legislation, and appropriation of $40 billion to finance the costs of response and recovery efforts, [43] and the major federal organizational and coordination changes

that occurred relatively rapidly, even before Congressional hearing or special task forces were formed.

Since September 11th, many new bills relating to terrorism are pending before Congress. The list of pending legislation is sizeable and has been changing at a rapid rate. The Library of Congress's THOMAS legislative information service maintains a list of homeland security legislation introduced and passed in the 107th Congress at http://thomas.loc.gov/home/terrorleg.htm.

Key Federal Response Plan

It is expected that both the Federal Response Plan and the National Contingency Plans will be reviewed and revised, based on the September 11th attacks. It is too early to know the natural of these changes. The structural and organizational issues as well as the basic authorities for Homeland Security Office probably will have to be clarified before the implementing mechanisms and response plans are changed.

Organizational Changes

June 15, 2001: FEMA reorganized, establishing the Office of National Preparedness, which reported directly to Director of FEMA. Also, the Planning, Exercise and Evaluation Division was established within the Readiness, Response and Recovery Directorate to work with state and local governments.

At least three new federal offices were created. The three most visible ones are:

> the Homeland Security Office,
>
> the Homeland Security Council (in the Executive Office of the President), and the Transportation Security Administration (in the Department of Transportation), and
>
> the Department of Homeland Security, under the Homeland Security Act of 2002, P.L. 107-296, signed by President Bush on November 25, 2002.

Paramount among these changes is the rapid creation of the Homeland Security Office. Other pending changes address an array of security concerns, such as changes in airport and airline safety responsibilities, regulations, and procedures; changes in immigration and naturalization laws and regulations; and changes in the transportation systems in the country.

It is too early to know just what the Homeland Security Office (HSO) will do with regard to contributing to changes in response plans, systems, and even recovery. Given the breadth of the Executive Order mandating its formation, it is likely that major changes are in the offing. Some of the other changes that are likely to occur in the coming months: improved warning and alert systems, improved detection and treatment for chemical and

biological agents; improved intelligence gathering and analysis from both domestic and international sources; changes in emergency management systems and personnel training; changes in FEMA's National Preparedness Office, changes in the Federal Response Plan and the National Contingency Plan, and more national Counter Terrorism (C-T) exercises.

This report ends with 2001 in order to allow enough time to pass to perform the assessments and analyses needed to understand what has transpired since September 2001. So many significant actions occurred during 2001 that it may be years before the full impacts and import of them are known.

Many analyses and studies conducted in 2002 shed light on those events; some will be referenced in this paper.

PART THREE: FINDINGS AND OBSERVATIONS

Current Setting

Although this analysis covers only events and outcomes that occurred through the year 2001, in the background of this report are the profoundly influential outcomes and general unease resulting from the September 11, 2001, terrorist attacks. Concern with national security and homeland security has extended to the nation as a whole as well as to many other countries. Concerns are being raised about the shape of future policies to reduce our nation's vulnerability to terrorism. Some of these ideas, such as detaining suspected “illegal combatants,” raise grave constitutional questions. Other ideas, such as the installation of explosives detection equipment in airports, are widely seen as good concepts that carry with them implementation problems.

The Office of Homeland Security was established in a matter of weeks after the September 11th attacks. Almost immediately afterwards, initiatives began to create a Department of Homeland Security. As of November 2002, the new department was legislatively authorized. The greatest federal reorganization since the formation of the Department of Defense in 1947 is now underway.

The aftermath of the September 11th events has provided a sense of urgency and currency to this analysis and also may have indirectly affected the research. There now exist both unprecedented awareness and deep concern nationally about emergency management capacity and capabilities at each level of government. Since the fall of 2002, the media keep asking, “Are we safer than we were a year ago?”

Findings

Importance of Selecting Focusing Events

The authors are concerned not only with assembling the facts of recent experiences with terrorist events in the U.S., but also with supplying a context for examining and understanding the facts. In order to derive knowledge and practical applications from past events, far more research has to be done, particularly with regard to examining the many outcomes from the September 11th events, and also the Anthrax incidents (2001), that occurred during calendar years 2001 and 2002.

The definitions and criteria for the selection of "defining" and "focusing" events need to be sharpened and refined. In this regard, the **TTL** served as a graphical table of contents initially. Upon closer examination of events and their outcomes identified in the **TTL**, however, some events in fact were not defining events, and it will be necessary to eliminate them from future revisions of the **TTL**.

A corollary concern is that there are both obvious or non-obvious, or perhaps direct and indirect disaster events. Examples of the non-obvious or background events include (a) the dissolution of the Soviet Union, with attendant concerns for political changes and control of weapons of mass destruction; and (b) the Unabomber, who over a period of many years sent lethal packages via the mail to victims.

Among the questions and issues for further research are the value, duration, and importance of the outcomes of key defining events. More study is needed to determine a number of issues including:

- specific problems or needs revealed after disasters;
- if some outcomes in fact contribute to improvements in the effectiveness and efficiency in emergency management;
- what are the capacity and capabilities of emergency management to deal with future major disasters?; and
- if the documented outcomes simply result in corrective actions solely aimed at specific situations.

Possible Clustering of Like Categories of Events

Attention should be given to the possibility of clustering the focusing events by type (e.g., bombing or bio-terrorism incidents) and examining their collective outcomes. For example, in the Gilmore I report on the Tokyo Sarin Attack, the authors focused on an analysis of the circumstances and facts as they have come to light surrounding the 1995 attack in the Tokyo subway system. That seminal event, the first time a non-state group had used a chemical weapon against civilians, is a benchmark against which all potential terrorists' attacks involving chemical or biological weapons will likely be measured in the near term. The analysis delves into all the implications of that most ambitious undertaking, including extensive research and development efforts spanning chemical,

biological, and even nuclear weapons aspirations, but one that ultimately fell far short of its intended purposes.

In the Gilmore I report, the authors examined incidents in the chemical, biological, radiological, and nuclear (CBRN) arena and assessed the inferences and lessons that can be drawn from Aum's activities with respect to U.S. domestic preparedness for potential acts of CBRN terrorism.

Learn from Possible Ramifications of Past Events

The authors also addressed the Salad Bar Poisoning in The Dalles incident in the Gilmore I report. The report suggested that this poisoning might suggest a scenario in which terrorists use chemical or biological weapons not necessarily to kill, but rather to incapacitate large numbers of people, thereby sowing fear in the community and the nation. Such an act may be as effective in achieving terrorists' goals as killing would be.

Duration and Importance of Major Outcomes

The need exists for more in-depth analyses of outcomes from all types of major disaster events to determine how lasting and significant they were. To what extent are major changes (legislative, regulatory, organizational, or programmatic) merely near-term "fixes" for problems or are they far-reaching changes that led to more efficient and or effective emergency management capabilities?

It would appear that the September 11th attacks led to a significant number of legislative and regulatory actions and were the major contributor to the very comprehensive and ambitious outcome of creating the Department of Homeland Security in November 2002. The September 11th attacks cannot be considered in a vacuum, however. Other efforts, undertaken in the wake of attacks or without any obvious trigger, provided the groundwork for the ultimate creation of the new department. For example, the Hart-Rudman Commission III report recommended that the federal government should create a National Homeland Security Agency.

Next Steps

The project team is well aware that more research and analysis is needed regarding the relative importance, duration, and impacts of many of the major outcomes identified in this report.

In his recent textbook, William Waugh (2000) states that the U.S. emergency management system has largely developed in response to specific major disasters. According to Waugh, "*For the most part, policies and programs have been instituted and implemented in the aftermath of a disaster, based almost solely on that disaster experience, and with little investment in capacity building to deal with the next disaster*" [emphasis added]. He also notes:

> There are increasing political and economic pressures to reduce disaster losses, but there are still political, economic, and social and cultural obstacles to the development of an effective national emergency management system. While there has been more investment in emergency management during the last decade, and capabilities are expanding, much needs to be done to improve the national system. [Waugh, p. 24]

Waugh's book was published in 2000, and since then a great deal of attention, effort, and money has gone into refashioning emergency management for the imminent threats of terrorism in the United States. There is now is more urgency to the needed task of examining and testing the statement above about the lack of long-term outcomes and investment in capacity building.

Is Disaster Policy Always Reactive?

The research team has observed that typically policy is reactive. The **Disaster Time Line (DTL)** and to a lesser extent the **Terrorism Time Line (TTL)** graphically display the reactive nature of emergency management, showing graphically that major events are the drivers of changes in legislation, policy, regulation, and organizations dealing with emergency management.

What remains to be examined closely, especially for the years 2001 and forward, is the extent to which outcome builds capacity. It may be that, since the catastrophic events of September 11, 2001, the quantity and quality of outcomes are very different and perhaps more significant than at any previous time. Two new considerations are:

Capacity in many realms of emergency management has increased, owing to the high profile of those incidents and the national attention being paid to various public safety and emergency management services, functions, and organizations. Virtually every state has added a homeland security office or set of functions to their emergency management agency, and new resources have been allocated to these areas.

Even if capacity is not in fact currently greater, commitment to the issue/need may have increased since September of 2001.

Additional research work is needed to closely examine disaster policies and determine if the September 11, 2001, events, and the Anthrax Incidents (2001) were in fact major milestones in terms of policy development and if recent changes in national policies regarding emergency management and homeland security have resulted in increased capacity.

It also is important to understand that while many states have made homeland security an important part of their emergency management agencies' missions, the extent to which this mission is displacing the natural and technological disaster function is an important question. Related to this question is the degree to which experience in natural hazards has been leveraged—or ignored—in the new reality of homeland security. For example,

FEMA's role in the Department of Homeland security may shift away from natural disasters toward security.

How Significant Were the Outcomes from Major Events in 2001?

For the most part, since this research project was conceived and carried out during 2002, it was not possible to include outcomes from the September 11, 2001 events and the Anthrax Incidents (2001) in this report.

As was noted in Part 2, both the September 11th attacks and the series of anthrax incidents that occurred in 2001 led to major outcomes in 2002. Moreover, it would not be surprising if outcomes and ramifications occurred for a few more years.

Preliminary research indicates that a large number of highly significant outcomes from those attacks occurred during 2002. They include:

- at least 10 pieces of national legislation;
- two Executive Orders
- one Homeland Security Decision Directive,
- one new federal department - the Department. of Homeland Security, and
- several significant reports

Given the magnitude of the two sets of terrorist events in 2001, it is no surprise that their outcomes and ramifications would continue for one or more years after the disasters. These outcomes have yet to be analyzed collectively, yet they are likely to have great significance.

APPENDICES

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