

## FEDERAL EMERGENCY MANAGEMENT IN THE U.S.: Implications of The Terrorist Attacks of Sept. 11, 2001

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### Abstract

The Sept. 11<sup>th</sup> terrorist attacks were the first catastrophic terrorist event to occur in the U.S. and the first that required both civilian recovery and military responses. This report sought to determine the scope of the impacts and to begin the process of examining the implications for the federal emergency management systems, programs, and policies.

This report discusses the defining characteristics of the attacks, the role of the media, and the initial role and functions of two of the responding agencies – the U.S. Environmental Protection Agency (EPA) and the U.S. Coast Guard (USCG) in New York City (NYC). It also briefly describes the various impacts: economic and financial, damage to infrastructure, equipment losses, business interruption, human productivity, airline losses, insurance payouts, decreases in tourism, revenue losses, impacts on the stock exchanges, and donations and charities.

The authors also evaluate the effects on public attitudes toward government, the new national public awareness of terrorism, public awareness of emergency management, and changes in public sector focus and workload. The authors describe anticipated changes in federal policy to better deal with such events in the future.

In the course of working on this report, the authors were stimulated to develop a related product: the **Terrorism Time Line: Major Milestone Events and Their U.S. Outcomes (1988-2001)**, which was published in March 2002 [1].

### Introduction

The terrorist attacks on the World Trade Center (WTC) and Pentagon are horrific events, of a scale and type never before seen in the U.S. or in the world. To our knowledge, no past terrorist disaster in the U.S. has resulted in both recovery and military actions to seek redress for the incident.

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Given the timing, nature, and magnitude of the attacks, plus the immediate extensive media coverage, the topics of terrorism and emergency management have received an unprecedented amount of attention not only in the U.S. but worldwide. Aspects of terrorism usually reserved to a small group of behind-the-scenes operational personnel suddenly have become of interest and concern to citizens throughout the nation.

In researching and documenting the outcomes of the events in NYC and the Pentagon, the authors chose to focus primarily on emergency management at the federal level. Even with this limited focus, the effects of the Sept. 11<sup>th</sup> events on the federal government involve a vast array of impacts and outcomes. This report will briefly describe the events and their effects, giving more time and space to some of the early impacts and ramifications. The report deals generally with emergency management issues and actions during the first 30 days after Sept. 11<sup>th</sup>. It does not cover the many problems and issues connected with the public management of health and environmental issues that began to emerge about four weeks after the attacks took place. Finally, our research relied mainly on secondary sources, because it was not possible to gain access to key actors for personal interviews in the first few weeks after the massive events.

The Unprecedented Role of the Public Sector As noted by Waugh, “Emergency management is the quintessential governmental role. It is the role for which communities were formed and governments were constituted in the first place – to provide support and assistance when the resources of individuals and families are overwhelmed [2].” For the emergency management community these vastly destructive terrorist attacks have a large number of aspects, impacts, and implications that are unprecedented. Clearly, these events will go down in history as a major milestone in emergency management and probably will result in major changes in the emergency management systems at each level of government in the future.

Given the vast scope of impacts and ramifications for government actions and policies, at every level of government, this paper can only outline or briefly discuss some of the impacts and outcomes of the Sept. 11<sup>th</sup> event. This report should be viewed as an early step in what is likely to be a long-term sequence of analyses and reports about a milestone set of disaster events.

## Approach

Our approach was to use the conceptual framework for the *Disaster Time Line: Selected Milestone Events and Outcomes (1965-2001)* as a starting point [3<sup>1</sup>]. The authors set out to research and document some of the political and policy impacts of the Sept. 11<sup>th</sup> attacks and their ramifications at the federal level. While working on the DTL, the authors discerned a predictable sequence of actions and outcomes from major defining disaster events since 1965. The key categories are, major after-action reports and documents; legislation, regulations, and executive orders; response plans; and organizational changes. The authors planned to document the expected sequence of actions and determine, to the extent possible, the causal relationships between the events and major outcomes.

Two issues arose while trying to apply the approach noted above. (1) Initially, it appeared as that the Sept. 11<sup>th</sup> events did not fit into the sequence observed previously. The authors later decided that although these events have some aberrations, they did fit into the basic pattern. The details of this finding will be discussed later. (2) The authors prepared a new, separate graphic, the **Terrorism Time Line**, in order to focus on the level of detail and space needed to adequately and appropriately display all of the details and underpinnings of the federal involvement in counter-terrorism.

## Events of September 11<sup>th</sup>

Many researchers and journalists have produced detailed descriptions of the events and the response efforts. Highlights of some of the most pertinent facts and some observations about their implications follow.

At 8:45 am (EDT) on Tuesday, September 11, an American Airlines aircraft was hijacked by a group of terrorists after taking off from Boston and crashed into the north tower of the World Trade Center Complex in New York City. At that time, the severity of the incident, the numbers of people involved, and the reason for the crash were all unknown. At 9:03 am a second plane, this time a United Airlines plane, hit the south tower of the World Trade Center.

During the period between the first and second crashes in NYC, the Washington Area Airport Authority had begun evacuating Reagan, BWI and Dulles airports as a precaution. Immediately after the second crash, 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 another American Airlines plane hit the Pentagon office building in Arlington, VA at approximately 9:40 a.m.. The Federal Aviation Administration (FAA) issued an immediate order to ground all the planes flying in the U.S. airspace. The news spread quickly through blanket media coverage that a fourth plane was heading towards Washington, DC 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.

Around 10:00 a.m. a fourth commercial plane went down in Somerset County, PA, about 80 miles southeast of Pittsburgh. About the same time a partial collapse occurred at the Pentagon building in the area of impact. Shortly after 10:00 a.m. the south tower of the World Center collapsed. Within the next half-hour, the northern tower of the World Trade Center collapsed. At approximately 5:30 p.m. a third tower in the World Trade Center complex, Building #7 also collapsed.

The Defining Characteristics. These attacks obviously were extraordinarily well planned and coordinated. They clearly had the goal of damaging 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 NYC, which is the heart of the international financial community, there is no doubt that the terrorists hoped for long-term negative economic consequences.

Not just the people living in New York City or in Washington DC, but many millions of people all across the country felt they were potential targets, especially those living in other large cities. 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 could be around 10,000 and 800 people were estimated to be dead in the Pentagon incident. Sadly, the initial fire fighting teams, including the NYC Fire Chief, deployed to the scene were among the dead and missing. The loss of about 300 skilled fire fighters and their chief was a major blow to the response force.

In addition to responding to the known disasters, prevention of further damage was a major concern. As these catastrophic series of events occurred, it was not - - and it still is not – clear whether there were other attack plans and when the threat of further attacks would end. Both elected and appointed officials had to take immediate actions and make the kind of decisions that they had never done before to fulfill their duties to the citizens. No doubt the terrorists intended to shake the public trust towards the government. One immediate worry was how could four commercial jetliners have been successfully hijacked from different airports and their whereabouts while in the air remained unknown.

President Bush's mission changed profoundly in a matter of hours. He was forced to assume a defensive role for both himself and the country as a whole. And when the source of the attacks was determined, he had to mount a war offensive against the perpetrators and other allied terrorists located in many countries. 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.

As thousands of members of urban search and rescue, emergency medical, emergency response teams, and tons of equipment were deployed, it became obvious that the debris removal would take months, if not years, and hopes of finding any survivors quickly faded. The FBI, other federal teams and the New York Police Department (NYPD) began the enormous task of sorting and sifting through debris for bodies and evidence, a task that also could take several months.

### **The Role of CNN and other Media**

Given the time of day, and the fact that many governmental and financial workers have access to Internet and TV news, word and pictures of the events spread fast. Thanks to CNN and other media, many public officials could see the actual scenes of the events in NYC and at the Pentagon only within minutes of their occurrence and were able to take action, such as opening emergency operations centers (EOCs) before being requested to do so officially.

What follows are two brief examples of initial response actions on the part of federal and military organizations, U.S. EPA and the U.S. Coast Guard.

#### **(1) U.S. Environmental Protection Agency HQ (EPA)**

On Tuesday morning, Sept. 11<sup>th</sup>, at the time of the first attack on the WTC, at EPA headquarters, in Washington, D.C., the Emergency Coordinator for the Agency, Jim Makris, and his deputy were engaged in a previously scheduled briefing for the EPA Administrator about the Agency's emergency management system and capabilities. They received a call and were told to turn on the TV to see the attack details. The officials then ended their meeting and opened the Emergency Operations Center immediately thereafter to begin disaster operations, according to Ed Terry, the Manager of EPA's EOC. Shortly thereafter, EPA headquarters established links with all of its East Coast regional offices to begin coordination and support of the NYC response efforts.

EPA has the authorities and responsibilities needed to perform emergency response functions under the National Contingency Plan. Plus, when the Federal Response Plan is activated, EPA has the lead responsibility for Emergency Support Function #10: Hazardous Materials. In this case, no one waited for formal initiation of any of the emergency response plans, but went right to work with their existing authorities [4].

#### **(2) U.S. Coast Guard— Initial Response in NYC**

Captain Dennis M. Egan, U.S. Coast Guard (USCG), who is the Director of the National Response Team (NRT), first learned about the NYC disaster on CNN TV. He immediately ordered that the alarm to the FBI's Weapons of Mass Destruction (WMD) hotline be activated. Rescue helicopters were sent to NYC from USCG bases in Atlantic City and Cape Cod. When helicopters arrived one hour later, NYPD helicopters already were on scene. The USCG's Long Island helicopter facility was stocked for support of the NYPD for several days, but not used in the search and rescue. The NY City government immediately moved its resources from Staten Island to Manhattan.

Various ferry ships, under USCG direction, were used to evacuate civilians out of Manhattan. The ships involved were the Staten Island Ferry and three other ferries; there were no major USCG ships in the area. Capt. Egan commented on the fact that the USCG ships were heading in, while the Navy ships were heading out of harbor. Many people fleeing the fires and destruction from the

WTC area ran toward the water, at the foot of Manhattan. The local police and Coast Guard officials on board the ferries were armed and available for assistance. Egan commented that USCG was a counter-terrorism “node” in these actions. The USCG went quickly from the response to security phase when it began screening passenger vessels and putting armed guards on cargo ships.

When the second plane hit the WTC, CG area commanders were contacted. The Boston USCG Admiral invoked “regional incident command,” and was established as the senior USCG official in NYC. He was instructed not to be in charge of the entire incident. He joined in the governor’s and the mayor’s response activities, but returned shortly thereafter to his post in Boston.

The Coast Guard Strike Teams set up in NYC to get the stock exchanges open again. They also did air sampling in the area. The Coast Guard used the “Vessel Traffic System” for navigation around the city. Because the antenna on the WTC tower was a major part of the system, range was reduced significantly. A new antenna was rigged on Staten Island as a backup.

The Coast Guard observed that FEMA set up their Regional Operations Centers after a five or six-day delay, due to the communications failures at the Federal Center in New York City, discussed elsewhere in this report. Egan commented that there were no major initial turf wars to report. The mayor was “significantly in charge.”

Communication was perhaps the greatest problem. All cell phone lines were dead. Only two major phone trunk lines into New York City remained, and both were completely saturated (this problem persisted for several days). The National Response Center sent three portable communication units by van to New York City the night of Sept. 11. Those units were established at Battery Park, Staten Island, and on the USS Comfort. Nevertheless, the CG had trouble setting up communications with those in charge in NYC.

Battery Park was taken over by the City of New York and by the FBI as a command center. The FBI Atlantic Strike Team had some initial trouble getting communications set up because their system was dependant on access by a self-contained van unit, which could not navigate the rubble-covered streets.

Within two hours of the start of the attacks, there was a National Response Team conference call. At about 1:00 p.m., there was another NRT conference call. The Coast Guard established a liaison at the FBI Strategic Intelligence Operation Center; this post was filled for two weeks.

Captain Egan noted that the most valuable preparations for the actual response of the USCG on Sept. 11<sup>th</sup> was due to TOPOFF, which was a major federal disaster exercise, mandated by Congress, held in 2000. This exercise apparently created many contacts that were vital in the September 11<sup>th</sup> response [5].

### **Emergency Management Considerations**

In NYC, initial efforts on the part of local federal regional offices to deal with emergency response were hampered by damage to the city’s emergency operations centers. New York City had recently completed a multi-million dollar state of the art EOC; but it was housed in one of the WTC buildings that was totally destroyed. The State of NY seemed to fare better. The Federal center in NYC was not physically damaged, but telecommunications were knocked out, which meant that FEMA Region II, EPA II and other federal agencies had to find other operational locations [6].

In Arlington, VA, the response relationships appeared to be efficient and effective, since the Arlington County Fire Dept. and Pentagon officials had worked with each other and conducted response exercises prior to Sept. 11<sup>th</sup>.

At the national level, things moved very quickly with Presidential declarations of emergency for the Pentagon and disaster for NYC. The conventional procedures for obtaining a Presidential declaration were not necessary; “self-initiating” requests, as allowed by the Stafford Act, occurred and the federal government as well as the military services began their response actions very rapidly.

Among the response actions that are highly unusual or unique to the events of Sept. 11th:

- **Emergency and Disaster Declarations:** “self-initiating” declarations; use of emergency and then disaster declaration at Pentagon;
- **Problems with Emergency Operations Centers** at the local and federal levels due to destruction and incapacitation, respectively.
- **White House Involvement:** rapid creation and selection of a director for the Homeland Security Office. While fully operational, the White House and some federal agencies were making, or planning, major changes in processes, procedures, funding, and organizational arrangements for emergency management.

## The Impacts

As of March 17, the latest information from federal and local officials give the following totals for the number of people dead or missing from the September 11 attacks:

- In NY City, approximately 2830 deaths have been confirmed. That number includes the 157 people on the two hijacked planes at the WTC. Only 773 of the 2830 people who died have been recovered and identified, though the remains of many are still being analyzed [7]. At the time of writing, additional remains are recovered almost daily.
- At the Pentagon site, a total estimate of 189 persons died; 64 persons, including the crew, died on board the hijacked plane; another 125 were dead or missing in the Pentagon building.
- At the Pennsylvania plane crash, 44 were confirmed dead on the hijacked plane initially. The number of injuries was a relatively small number, because all of the above events were so devastatingly deadly.

The Economic and Financial Impacts. It is a challenging task to calculate the overall costs of September 11<sup>th</sup> attacks. The destruction of the WTC obliterated about 12 million square feet of Class A office space, which is the equivalent of all office space in Atlanta or Miami [9]. An additional 18 million square feet of office space in downtown Manhattan was damaged.

Infrastructure. In NYC, a significant amount of infrastructure was ruined in the neighborhood of the World Trade Center Complex, including a crushed subway station, plus the loss of five phone-switching stations, two electrical substations, 300,000 telephone lines and 33 miles of cable. It has been estimated that replacing the destroyed subway lines would cost around \$3 billion and that utility repairs, including 300,000 telephone lines, one phone switching station and six miles of electrical cable are estimated to cost \$2 billion. Additionally, rebuilding the PATH NY/NJ station below WTC would be about \$2.4 billion. The estimated total cost for replacing the basic infrastructure is \$7.4 billion [9].

The Pentagon office building, which is owned by the Department of Defense, is estimated to have sustained \$1 billion in damages. It was fortunate that the hijacked plane hit the Pentagon in the newly remodeled section, since relatively few people were in the not-yet-completed offices and the structure, windows and other construction details were more attack-resistant than the rest of the building.

Equipment Losses. Going beyond the infrastructure costs in NYC, there were equipment and related losses - such as fire trucks, thousands of computers furniture, and other equipment items - that disappeared with the towers. Early estimates suggested that anywhere between \$2 to \$5 billion



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worth of telecom and computer equipment was destroyed. The total property loss was estimated at \$34 million, according to the New York City Comptroller Alan Hevesi. That is nearly twice the \$16.8 billion record set by 1992's Hurricane Andrew [9]. Similarly, but on a smaller scale, at the Pentagon, there were computers, office equipments, and other unknown equipment and supplies were consumed in the fire after the plane hit.

Another unusually large cost in NYC was related to dealing with the immense amount of debris over the multi-acre area disaster site. The debris had to be sorted first for human remains, evidence, and later deposited in a landfill. The NYC Controller predicted that it would cost a \$14 billion just to clean up and police the site.

Business Interruption. The NYC site probably set an all-time record for business interruption costs, which were initially estimated at \$21 billion; the most serious losses occurred in the downtown neighborhoods that were inaccessible for weeks after the attacks [10]. Six months later, an official from the City of New York, Office of Emergency Management, gave an estimate of \$83 billion for the overall economic impact on the city from the attacks, based on her discussion with the business community [11].

Built in 1970, the World Trade Center housed more than 430 companies from 28 countries. They were engaged in a wide variety of commercial activities, including banking and finance, insurance, transportation, import and export firms, customs brokerage, trade associations and representatives of foreign governments. An estimated 50,000 people worked in the World Trade Center, and another 140,000 visited the complex daily. Estimates of how many people were in the WTC when the attacks began vary from 15,000 to 40,000, according to an article in the Washington Post [12]. Thus, the ratio of people who safely got out of the many impacted buildings was many times higher than the number who died there on Sept. 11th.

Companies like Morgan Stanley, which by far was the WTC's largest tenant -- with 3,700 employees (all but 15 unaccounted for) -- was fully operational less than 48 hours after the tragedy. Remarkably, Cantor Fitzgerald lost 680 of its 1000 employees but was operational for bond trading two days after the attacks.

Many Wall Street firms would have been inoperative for many more weeks after the attacks if it were it not for the careful contingency planning they began after the 1987 stock market crash and accelerated after the 1993 WTC bombing. These financial firms rely on two critical services to guarantee a quick rebound from natural and man-made disasters: (1) information backup services that collect computer tapes and store them in highly secure suburban facilities, and (2) alternative facilities that are fully equipped with mainframes and computer servers that replace lost computing power. For a subscription fee, plus a disaster assessment that may run into the millions of dollars, stricken firms were able to move their personnel to such a service provider's centers for up to six weeks [9]. (After that the companies had to find their own space). Many companies have decided that it is prudent to spread operations over multiple locations on different electrical grids and telephone networks [13].

Human Productivity. Another sad but important indicator of loss is the loss of human lives and their future productivity as indicated in purely financial terms. Given the average age of the workers who lost their lives (40), the NYC Comptroller estimated the "lost human productive value" to be about \$11 billion. Measured by payroll, NYC, with less than 3% of the country's workforce, accounts for 37% of the U.S. securities industry, 20% of advertising, and 18% of book publishing. The best and brightest from around the world are drawn to New York because it is where they can do their finest work and reap the highest rewards. In the short run, the September 11 attack would add a \$500 billion blow to a city economy already stumbling from the bear market on Wall Street and the nationwide slump. More than 100,000 New Yorkers thus would eventually be thrown out of work by the attack, according to New York State Labor Dept. estimates [13].

Airline Losses. The airline industry received a major blow due to the temporary shutdown of the air travel system and later widespread fear of flying by potential customers. Airlines and airfreight were down for weeks. People who chose to fly faced long lines due to increased security measures. Anything suspicious became a reason to ground planes. After the attacks, the airlines received a \$15 billion government bailout, announced 100,000 layoffs and slashed 20 percent of their flights [13].

In the Washington, DC area, Reagan National Airport and its businesses were the hardest hit in this ordeal. The airport was ordered to shut down immediately after the attacks and was not allowed to open until 23 days later due to its proximity to so many potential targets. The cost for closing was \$330 million per day to the airport and Northern Virginia businesses and \$27 million to state and local tax revenue [13].

Insurance Payout. The \$126 billion commercial insurance industry is facing a \$30 billion payout. This industry will never quite be the same, since insurers and reinsurers had never considered terrorism when pricing their premiums. The uncertainty about how to predict the future attacks is a huge challenge for the insurance industry.

Tourism Income Losses. The tourism industry hit has been hardest in Washington, DC area and New York, but with secondary and tertiary effects in Boston, Los Angeles, Las Vegas and other major tourist destinations. About one-third of the nation's 265,000 unionized hotel and restaurant workers have been laid off. Hotel expansion plans have been on hold almost everywhere [13].

Revenue Losses. The U.S. economy, threatened by recession before September 11, has suffered a number of blows in the weeks since. The leading economic indicators dropped in September. Yet the nation's financial markets have thus far weathered the uncertainty, making up losses experienced in the days after reopening.

Former Mayor Rudolph Giuliani estimated the city would lose \$1 billion in revenues this fiscal year – including a 20% decline in personal income taxes and more than 30% declines in hotel and real estate transfer taxes. Additional costs for additional police overtime, downtown cleanup, and other services would soar into the billions. Even with the help from Washington, New York was expecting a budget deficit of \$4 billion in the next fiscal year. The city agencies would have to cut \$1 billion from their spending plans. The federal government would reimburse the city for \$11.4 billion in expenditures directly related to the attack, such as \$5 billion for emergency construction at the WTC site, and \$3.8 billion for police, fire, and health services. Congress approved \$20 billion in aid for New York, Virginia, and Pennsylvania [13].

The NY and American Stock Exchanges were closed for a week until September 18<sup>th</sup>. The stock market declined by double digit percentages immediately after the terrorism attacks. The NYSE dropped 1,369 points, the biggest point loss and the fifth worst week ever for the Dow Jones industrial average.

Charities and Donations. As a result of the attacks on the WTC, and all of the media attention given to it, an unusually large number of charities formed, in addition to the major ones already in existence – such as the Red Cross and the Salvation Army - - and an unprecedented amount of donations were received. The resulting problems ultimately had to be straightened out by the Attorney General of the City of NY. As a sidebar to this topic, the current President of the American National Red Cross lost her job as a result of some disputes with the Board of Directors of that organization. It should be noted that donations related to the Pentagon disaster do not appear to have the same complications.

Health and Human Services Operations. According to a news release from the U.S., Dept. of Health and Human Services (HHS), the "9/11" response in New York City, constituted the largest National Disaster Medical System (NDMS) response ever. Of the more than 9,500 rescue workers,



1364 were volunteer health and mortuary professions who provided their services as part of the national NDMS, and more than 600 others were health professions from HHS Commission Corps Readiness Forces and the Centers for Disease Control and Prevention. Disaster Mortuary Operations Response Teams (DMORTs) supported the NYC Medical Examiner's Office, processing 15, 528 human specimens, 270 bodies, and identified 750 victims. On Sept. 11, 2001, the Dept. of HHS declared a national health emergency; the Office of Emergency Preparedness immediately deployed NDMS and Commissioned Corps teams to the disaster site. The HHS funding totaled \$301 million for response and recovery activities resulting from the Sept. 11 attacks [14].

## Outcomes

*It is not possible to overstate the dramatic changes in political culture, attitudes, and philosophy of the federal government regarding emergency management and counter-terrorism that have resulted from the Sept. 11th attacks. Plus, many of these changes were immediate.* Some elements of the emergency response went extremely well, such as the personal leadership of Mayor Giuliani, Governor Pataki, and the high level of competence of the Arlington County, VA Police and Fire Services. But, many concerns about the weaknesses in the nation's ability to deal with a major terrorism event quickly surfaced, such as: (a) need for better detection and warning systems for a terrorist attack, (b) central coordination at the federal level, (c) weaknesses in the public health and disaster medical systems, and (d) core capabilities of some states and localities to manage a massive disaster.

Other related systems were severely criticized for failures of weaknesses, such as the intelligence gathering and analysis capabilities of the international and domestic federal agencies; lack of coordination among various federal agencies with information about suspected terrorists; and problems in tracking foreign visitors and supposed students. The ramifications and implications are so substantial that it will take years of research and documentation to capture them.

A Major Sea Change. Within days after Sept. 11<sup>th</sup>, the Bush Administration and the Congress rapidly made a major philosophical shift in their attitudes and willingness to combat terrorism, including major changes in national priorities, budget, and spending plans – all in a matter of a few weeks after the events.

Public Attitudes Toward Government. On Sept. 30<sup>th</sup>, a **N.Y. Times** article titled *Now Government is the Solution, Not the Problem*, stated:

*“After 20 years of exulting in the power of the private sector, in deregulation, tax cuts and reining in the Washington bureaucrats, Republics and Democrats alike are talking about a muscular role for the government in the aftermath of the Sept. 11th terrorist attacks. They are bailing out the airlines, establishing a new Office of Homeland Security, passing a big new aid package to rebuild the areas devastated by the attacks and pondering an even bigger effort to stimulate an ailing economy. When the chips are down, where do we turn? ... To the government's firefighters, police officers, rescue teams. To the nonprofit sector's blood banks and shelters. And to big government's Army, Navy and Air Force [15].”*

Another perspective is that of the professional public administration community, which noted that the aftermath of the Sept. 11th events, provided a unique glimpse at public employees at work. In the newsletter of the American Society for Public Administration (ASPA), it was noted:

*“In a way unmatched in history, Americans had a chance to watch public administrators at work and, sometimes, under attack. They saw countless cases of unmatched bravery. The broadcast heroism, in fact, only hinted at the ways that government works rose to the challenges of their jobs.”*

ASPA further noted “*The real work – how to refashion the field to master the enormous new challenges facing it – begins now. Public administration will not only become more important, but its job has been dramatically transformed* [16].”

National Public Awareness of Terrorism. Given the timing, nature, and magnitude of the attacks, plus the immediate extensive media coverage, the topics of terrorism and emergency management received an unprecedented amount of attention not only in the U.S. but worldwide. Topics usually reserved to a small cadre of behind the scenes operational personnel suddenly were of interest and concern to citizens throughout the nation. This was captured in a **Washington Post** Article entitled ***Think-Tank Presses are Suddenly Best-Selling Publishers.*** The article noted, “*Across Washington, think tanks are finding their once obscure books, studies, and policy reports are hot with the general public* [17].” Discussions of Terrorism, Bio-Terrorism, and Weapons of Mass Destruction are now commonplace among the general citizenry in the U.S. The Sept. 11<sup>th</sup> events provided a crash course on the topics. What was a somewhat esoteric technical area of interest, pursued by a relatively small group of responsible persons is now discussed everywhere.

Public Awareness of Emergency Management. Citizens have become more aware of their public officials and how they conduct emergency management at each level of government. In New York City, Former Mayor Giuliani and Governor Pataki were directly involved in the response efforts and were highly visible doing their jobs on a daily basis. It should have been clear to most citizens that their local and state government officials were working ardently and effectively to help them.

One interesting indicator of the level of commitment and depth of the local emergency management effort is that at the third and final location of the city’s emergency operations center (EOC) ultimately contained 350 workstations, according to newspaper accounts. That huge number is a crude indicator of the amount of coordination involved in the response and early recovery activities.

Similarly, public awareness of the key roles and functions of local public officials in Arlington, VA was heightened by the attack on the Pentagon. Prior to the event, Pentagon staff had worked closely with Arlington County Fire Dept. in the event of a major fire in that building. The County Fire and Policy Departments also were highly effective and committed to their jobs, according to two reports in the **Washington Post**. They too received great support and encouragement from the local citizens.

Changes in the Public Sector Focus and Workload. As was noted above, the role of public practitioners in emergency management has changed and probably will continue to change as the U.S. goes into the recovery period. A related outcome is the effect on public officials, both elected and appointed and the long-term burden on their workloads. For example, Senator Hillary Clinton (Dem., N.Y.) described the economic damage as “incalculable” and said “... [She has] *been consumed with the details of organizing federal assistance for the city and expects that responding to the emergency on both the national and local levels will dominate her Senate career for the foreseeable future* [18].”

Some Specific Outcomes. The five specific categories of observed outcomes of major disaster events that the authors developed and used in the **Disaster Time Line; Selected Major Milestone Events and Their U.S. Outcomes (1965-2001)** were applied to the Sept 11<sup>th</sup> events in order to capture some of the most frequently observed aspects of outcomes from a political and policy perspective.

**(1) Major Reports and Documents.** After examining dozens of major 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 [19]. Yet, in less than a week after the Sept. 11<sup>th</sup> 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 several major reports about terrorism had already been completed by September 11<sup>th</sup> 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 ([20], [21], [22]) and on protecting critical infrastructure; the Gilmore report III update; and the Stimson Center reports.

*It would appear that the information and knowledge about what to do already existed before Sept. 11<sup>th</sup>. 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.*

**(2) Legislation** In a matter of about 16 weeks after the terrorist events, the 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 U.S.A 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 (1) 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, and (2) that major federal organizational and coordination changes occurred relatively rapidly, even before Congressional hearing or special task forces were formed.

Since Sept. 11<sup>th</sup>, 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.

**(3) Executive Orders.** 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.

**(4) Key Federal Response Plans.** It is expected that both the Federal Response Plan and the National Contingency Plans will be reviewed and revised, based on the Sept. 11<sup>th</sup> attacks. It is too early to know the nature 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.

**(5) Major organizational changes.** There were at least three new federal offices created, the Homeland Security Office and the Homeland Security Council (in the Executive Office of the President) and the Transportation Security Administration (in the Dept. of Transportation.). Paramount among the changes here is the rapid creation of the **Homeland Security Office**. Other major changes pending include a wide array of security concerns, such as changes in airport and airline safety responsibilities, regulations, 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 the formation of that office, it would be likely 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.

Given the vast complexity of the attacks and their aftermath, the authors created the **Terrorism Time Line: Major Milestone Events and their U.S. Outcomes (1988-2001)**. Also under development are a narrative explanation of the chronology and a policy analysis of the major events and their outcomes.

In closing, in an article entitled *Suddenly, Americans Trust Uncle Sam*, noted author Francis Fukuyama is quoted as saying: "Trauma and war bring out communal solidarity and remind people of why we have government." Regarding the creation of trust in government, he said "... a national crisis alone does not create trust in government. It's a combination of external threats and government effectiveness [24]".

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Ms. Rubin has worked as a consultant for many organizations -- private, non-profit and governmental. Her work includes basic and applied research; the development and conduct of training programs; and the creation and operation of various information dissemination and utilization efforts regarding natural hazards and disasters. Recent projects include the Terrorism Time Line, the Disaster Time Line ([www.disaster-timeline.com](http://www.disaster-timeline.com)) and Disaster Central ([www.disaster-central.com](http://www.disaster-central.com)). She also has developed a web site for Digital Disaster Educational Resources at GWU: [www.seas.gwu.edu/~cbrubin](http://www.seas.gwu.edu/~cbrubin).

Ms. Rubin holds a B.S. from Simmons College and an M.A. from Boston University in Political Science. Her majors included political science and public administration. She has written more than 36 publications on hazards and disasters, and in addition, has given many lectures and talks on emergency management topics.

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Ms. Tanali is a Research Associate at the George Washington University, Institute for Crisis, Disaster, and Risk Management. She has conducted basic and applied research for various organizations in the fields of emergency, disaster and risk management and organizational management since 1998. She has recently served as a principle graduate research associate in the collection and synthesis of human needs data in the aftermath of 1999 Turkey Earthquakes, and in observing and documenting the inter-organizational response to the September 11, 2001 terror attacks (both funded by the National Science Foundation) and in evaluating the United States Army

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