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From Civil Defense to Homeland
Security:
An Analysis of Emergency
Management in an Age of Terror



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Abstract

Emergency Management as a field has evolved out of the old civil defense programs from the early twentieth century. However, the Twenty-First Century brings with it a vast number of new problems beyond the scope of traditional emergency management. Fortunately, emergency managers can draw from the civil defense foundations to meet growing threats such as those terrorism poses to the population. This paper attempts to address many of the issues that arise as emergency management is tasked with addressing terrorist threats. In order to better understand the dichotomy between Civil Defense and Emergency Management this paper attempts to compare the two in order to see which practices are most useful in the new models of emergency management and which should be adopted from the old model of civil defense. Some of the issues that are addressed in this paper include governmental funding of emergency management, public education in times of disasters, overall preparedness efforts, general civilian preparedness, and why emergency management is even considered capable of addressing legitimate concerns about terrorist activities in the United States. While this paper focuses primarily on historical aspects of emergency management and civil defense it also offers multiple solutions for addressing many of the policy shortfalls inherent in the current methodology held by FEMA and the Department of Homeland Security.

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From Civil Defense to Homeland Security

Emergency management finds its foundations dating back to the early days of the First World War. (W. Green) The overall increase in technology prior to the war facilitated the creation of devices such as airplanes and submarines dedicated solely to warfare. Cities and the people who lived in them were finding themselves especially vulnerable to attack. In response to this, many municipalities enacted the first attempts at civil defense and preparing the population for the potential of military attack. In the United States, where due to the limited technology of aircraft and submarines, the population was not as threatened, civil defense was placed under the control of the Council of National Defense; which was less interested in protecting people against military attack and was more concerned with the protection of industry and shipping against the potential for sabotage. (W. Green) At the end of World War I, the Council was suspended; however, the multi-level, federal, state, & local, approach that the Council implemented would remain indelibly imprinted on the field to present day. (W. Green) The breakout of the Second World War prompted the United States government to bring the council back into service. However, President Franklin Roosevelt assumed that it was too important a task to leave primarily to the state and

local councils, and in early 1941, created the Office of Civilian Defense to oversee the operations previously under the control of the Council. (Tennessee Emergency Management) The Office of Civilian Defense significantly increased the amount of civilian preparation through the Civil Defense Corps, and trained millions of volunteers on basic decontamination, first aid, and fire fighting. (Delany) The success of the Office of Civilian Defense would form the basis the Civil Defense Act of 1950 and the changing of the Office of Civil Defense into the Federal Civil Defense Administration. (Delany) Eventually a long-term plan was enacted, based on the recommendations of the so-called "Blue Book," a 162-page manual that outlined a potential model of civil defense, one that harkened back to the original multi-level organizational model of the Council of National Defense. (Tennessee Emergency Management) This "Blue Book," using outdated models that were based on major militarized actions, would guide the creation and expansion of civil defense programs over the remainder of the twentieth century. Many of the programs to come out of "Blue Book" are based on old civil defense models, and were included in the scale and scope of the Federal Emergency Management Agency at its inception during the 1970s. These programs have shaped how emergency manager's deal with disaster situations and are vital to understanding the emergency managers response and handling of terrorism and other mass casualty incidents.

In order to understand how current models dictate the method that emergency managers have for addressing terrorism, it becomes vital to understand some truths basic to terrorism and terrorist activities. While no internationally accepted definition of

terrorism is quite adequate to understand the full scale of terrorist activities, for the purposes of this paper terrorism will be defined as any action or threat that uses violence to influence an audience into action or inaction, most commonly political or religious. While terrorism is not a new phenomenon, terrorism is new to the scope of emergency management and is likely to become a growing issue. (Cetron 6) Given its similarities in threat scope to military attacks on cities many responsibilities dealing with the response and recovery from terrorist attacks has been placed in the hands of emergency managers. Prudent emergency managers have begun to focus more on this job as all indications are that number and scope of terrorist incidents will increase. One key indicator of this is the lessening of violence in Iraq; many of the veterans of the insurgency are from outside Iraq and as these veterans return home, they provide a growing network of training for future would-be terrorists. (Cetron 9) Furthermore, this threat grows exponentially when faced with the reality that at some point a terrorist organization will gain legitimacy. (Cetron 21) This will inevitably occur when a group overthrows, or in some fashion gains control of, a currently vulnerable state. (Janowski 104) History has shown this has occurred several times in recent memory: the Bolsheviks, Irgun, Svi Haganah, Stern Gang, Fatah, and Hamas have all come to control established states at one point in time or another (Cetron 22). Al Qaida has been attempting to regain state sponsorship since the US invaded Afghanistan and has found a modicum of success in Somalia, where Sheik Hassan Dahir Aweys has gained leadership of the Conservative Council of the Islamic Courts, one of the larger groups vying for control of the country. (Various) This is significant because of the fact that

Aweys was an associate of Osama Bin Laden throughout the 1990s and went underground following the 9/11 attacks only to reappear in Somalia in 2005. (Various)

The situation in Somalia points to the possibility of other terrorist organizations attempting to destabilize and overthrow other third world nations in a bid to gain valuable resources to further their various goals. (Cetron 21) As many of the most devastating weapons of mass destruction require the resources of a nation-state in order to be brought to fruition this trend should be of interest to those in the field of civil defense. An even more devastating scenario is one in which a terrorist organization gains control of a country that already possesses nuclear technology. Several such countries exist in central Asia including Pakistan, Iran, and the former Soviet Republics; all are vulnerable to determined actors who seek to gain weapons of mass destruction. (Cetron 23-24) However, not all terrorist organizations seek to gain control of nations, or perform actions that will kill thousands of people. These smaller organizations might consist of only a few individuals and are often below the scale of international relations, instead attempting to influence general opinion on particular topics on a local, regional, or national scale. Groups similar to past organizations, such as the Weather Underground, The Animal/Earth Liberation Front, or the Viper Militia are all potential threats to civilian populations and must be included in any serious conversations dealing with potential terrorism. This is one area where emergency managers must expand their understanding from the old way of thinking about attacks that those in the field have inherited from civil defense, since not all attacks on the civil

population will be large scale or even deadly, but they still must be addressed in a professional manner.

Understanding the various groups that are active in terrorism is one part of the equation in protecting the civilian population from attack. Another major part lies in understanding the roles assigned to various groups in anti-terrorist responses. The military serves a vital role in inhibiting terrorism directed towards the United States by overseas groups; its primary responsibility is to remove the ability of enemies to launch strikes against US citizens. However, the military is not effective against domestic terrorism due to the restrictions of the Posse Comitatus Act, leaving the defense of civilians to the domestic police and courts. (Trebilcock) While the shift away from the "Root Cause Theory" of police work has been slow to spread across police departments throughout the United States, the adoption of several proactive policing techniques will give domestic police forces a viable chance to stop terrorist activities before they occur. (Howard 5) The "Broken Windows" approach to policing has been shown to lessen severe crimes in New York City, by punishing minor crimes. (Howard 6-7) The consensus is that prosecution of the minor crimes that terrorists use, such as forgery, illegal border crossings, and weapons violations, to enable their more serious crimes is one such way to stop potential terrorist activities before they can pose a serious threat to the civilian population. (Howard 7) Another important aspect of anti-terrorist response is the role that the various intelligence services play in collecting data on potential attackers. These groups arguably serve one of the most important functions in stopping terrorist activities before they can prove damaging to United States interests

since these groups are able to provide vital information on potential threats to parties who are capable of taking action. Finally, emergency managers are given the task of preparing the population for potential attack including mitigation efforts that would lessen the severity of attack. In the event that an incident does occur, the emergency manager coordinates response and manages the after effects of the attack according to guidelines established by the Federal Government. Emergency managers face a unique task in this for several reasons; the first is that terrorism, unlike other incidents that emergency managers deal with, is performed intentionally with the objective of causing as much damage as possible. The very nature of terrorism makes planning difficult from a mitigation aspect and oftentimes responders will find themselves the targets of terrorist actions. Additionally, emergency managers do not deal with other agencies responsible for anti-terrorism activities, excepting maybe the police department, on a regular basis, necessitating many new relationships between agencies that were not designed to communicate or be compatible originally. Finally emergency management is a field that is viewed as less than priority spending by elected officials, leading to emergency management programs often being the most underfunded of all agencies tasked with anti-terrorist activities. This lack of funding is a holdover of bad practices that are inherited from the old civil defense programs of the cold war era and if continued, will perpetuate a system that is currently inadequate for addressing terrorist attacks.

In order to understand why this sets up a system that is inadequate for addressing the myriad of potential attack methods at the disposal of terrorist groups, it

becomes necessary to look at the systems established during the Cold War for addressing attacks against the US population. It is vital to understand that these systems, inherited from Cold War thinking, form the foundation of emergency management as it exists today. Following World War II, the primary focus of civil defense was to protect the population against nuclear weapons and the aftereffects of such devices. (W. Green) The official policy of the United States and the NATO alliance was one of Mutually Assured Destruction, also known as MAD; this policy, also referred to as deterrence, relies on the idea that if a full-scale nuclear exchange occurred, then all actors would face annihilation. (Gaddis) This thinking led to the US spending far less than many other developed countries on establishing effective civil defense procedures, viewing such expenditures as superfluous. (Kearny 6-7) The Federal Government considered establishing a system of bunkers and hardening of systems but deemed it too costly, instead deciding on an education program designed to teach people to protect themselves until the government could respond. (E. Green) Reminders of this thinking still exist today in warnings for people to keep enough essentials on hand to allow them to survive for at least 72 hours in the event of a disaster. This low-budget assured-destruction thought process led the United States to spend roughly \$0.75 per person on all disaster preparation, including nuclear preparation. (Kearny 6) When compared to European countries such as Switzerland, which spent an estimated \$12.50 per person solely on nuclear preparation during the same period, it becomes easy to gain an appreciation for how little actual importance the protection of the civilian population held. (Kearny 6) Additionally, little to no attention was given to potential

biological or chemical attacks on the population during this period since it was deemed too difficult to deploy such weapons accurately or strategically. (W. Green) Teaching the population to protect themselves until the government could respond would make sense except that the governmental plans also assumed that mortality rates would be high and any response would be slow in coming. (W. Green) It was assumed that the electromagnetic pulse from detonations would disrupt communication systems and that the military would be busy responding to the attackers. (W. Green) Additionally, it was accepted that cities would be the primary targets and that most survivors would be those who could escape the cities before the blasts. Neither of these assumptions hold true in other mass casualty incidents (MCI). The accepted plan for civilians in dealing with nuclear attack, that of evacuation of the cities, also has a negative consequence when it comes to economic recovery since most of the industrial centers were considered to be targets and abandoning them would have a domino effect on all other industries given the interrelatedness of production in the US. Through examination of the evidence it becomes apparent that the government was heavily invested in the idea that there would be no recovery from a nuclear exchange and did not see a point in funding serious civil defense initiatives other than those designed to promote continuity of government. (E. Green) Given the lack of serious attention or funding given civil defense, the likelihood is that the evolution into modern day emergency management is also suffering serious flaws in its transition away from a nuclear-centric civil defense program into an all-hazards focused emergency management program.

Many of these flaws are seen prevalently throughout the emergency management community and can definitely be seen as holdovers from Cold War civil defense. Most striking to an outside observer is the bunker mentality that modern emergency management seems to cling to tenaciously. As Eric Holderman, the Chief Architect for a firm that specializes in building Emergency Operations Centers and other governmental buildings, remarked, "Emergency Managers are strange animals. They are perhaps the only client that we have to argue with in order to put a window in their office." (Holderman) This comment is telling of the environment in which emergency operations are conducted and is carried out in the most common methods of Emergency Operation Center construction and design, primarily that Emergency Operations Centers are built more like bunkers than governmental offices. (Holderman) Emergency Operation Centers have been built, for the last several decades, primarily underground, with no windows and were built with the primary goal of surviving a nuclear blast intact. (E. Green) As a result, security is a secondary or even tertiary concern leading to a vulnerability to other incidents that would be just as devastating, and carries the potential for failure in continuity of operations. This focus on bunker style Emergency Operation Centers dates back to Cold War Era mentality when all levels of government began creating emergency offices in basements, often alongside emergency communications centers. (McCool) While a growing movement is starting to move Emergency Operation Centers out of basements and into more secure locations, placement of Emergency Operation Centers underground is practice that has continued to present day primarily because of bureaucratic inertia. (McCool) This is significant

because it shows the difficulty that all levels of government have in moving away from certain ways of thinking about civil defense/emergency management programs. Even as useful aspects of civil defense thinking are phased out, deemed unfeasible, or simply forgotten, there are aspects, albeit unhealthy ones, of civil defense thought that manage to stay within the memory of politicians and decision makers.

Another issue with the conversion from civil defense to emergency management is the lack of standardized training or professional emergency managers. Instead of professional emergency managers, emergency management programs were often staffed by volunteers who would also serve other roles in government. (McCool) This harkens back to the block captain model of civil defense, in that oftentimes a person is placed in charge of a program with minimal effective training and is only doing it on a part time basis, probably because no one else wanted the job. This leads to a certain level of inertia in advancing the field because this person will, more likely than not, perform the way his or her predecessor did. Additionally, this continues a cycle of negative interest in the community that equates with fewer funds made available for the program. While many new colligate programs and professional certifications are spreading throughout the country, giving needed training and credibility to emergency managers, the field itself still is relatively unknown to the general population or even elected officials. One common complaint by emergency managers is that they often find themselves having to explain to elected officials exactly what roles and tasks they perform in a governmental capacity. (McCool) This lack of understanding by local or state governments coupled with a long-standing unwillingness by federal legislators to

provide adequate funding means that emergency management programs become very low priority at budget time. This trend, dating back to Cold War era spending, means that emergency managers are often operating with technology that nears obsolescence, a mistake that will prove costly in the future as terrorists become more technologically savvy.

The problems and issues thus far discussed, primarily that civil defense/emergency management is often attempted with little or no financial backing, often using volunteer workers who operate using outdated models of thought about attacks on civilians, oftentimes with outdated equipment, are only compounded by the expansion of the scope and scale of civil defense into modern emergency management. As established earlier, many of the procedures prescribed for nuclear warfare are simply transferred over to modern ways of thinking about the various hazards that emergency managers may be forced to cope with or that terrorists can devise. This can lead to various issues that might arise since inherent differences exist between nuclear, biological, or chemical attacks. Additionally, much of the philosophy behind nuclear detonation survival in the United States since the early 1950s focuses on evacuation of the major cities. (Bond) This ideology continued through the 1980s and into the 1990s with the crisis relocation plan. (Cline B-12) While evacuation plans made sense in the earliest days of nuclear weapons, when the primary delivery method was strategic bombers, once Intercontinental Ballistic Missiles (ICBMs) were invented, evacuation became an implausible method to defend the civilian population, having an average delivery time of less than 30 minutes. (Agency) Furthermore, hurricane evacuations

have shown the difficulties in evacuation of large-scale cities. (Wolshon 27-34) The problems with evacuation hint at the need to expand decontamination capabilities within all major metropolitan areas. Fortunately, current government officials seem to be aware of the failures that current models have in protecting the civilian population from attack and are in the process of writing new models. (Bond) This will become even more necessary as the facts of terrorism changes and incidents such as the Mumbai attacks become more prevalent. (Cetron) Emergency management, as well as the government officials they represent will need to understand that there will be incidents where sheltering in place will be the preferred method of coping with the disaster and that preparations will need to be made to have supplies close at hand for dispersal to the population.

Understanding gaps and vulnerabilities in the system is one major obstacle to overcoming the burdens that are placed on the present by lack of preparedness in the past. As this growing awareness of vulnerabilities in the system reaches the social consciousness, the systems and methods of emergency management will invariably be forced to change to abandon methodologies of the past in favor of what will prove to be the next practices. Perhaps the most important "next practice" that will need to arise is an overall embracing of technological improvements including usage of the internet. FEMA does have a website, a distinctly user-unfriendly morass of links and technical jargon, neither of which are truthfully useful to a typical American seeking data on how to prepare or what to prepare for. (FEMA) Of the 77 counties in Oklahoma, only eight have working websites. (Management) Given the growing usage of the internet for

news and information of events, it seems inconceivable that so few agencies have begun effectively utilizing this medium to communicate and educate the population at large. It has become quite evident that terrorists have been using the internet for some time now to recruit members, spread propaganda, and teach other would be terrorists how to enact various attacks. (group) Additionally, it currently serves as a weapon of mass disruption by allowing unfiltered access to the terrorists target audience. (group) Defusing of propaganda is one area where public information officers could become a valuable tool. By offering opposing information, a public information officer would serve to marginalize the message of terrorist groups serving to disrupt one of the main goals of terrorism, influencing the audience. (Ooten)

While embracing the internet is a task which will need to be accomplished with some expediency in dealing with the threat of terrorism, or other mass casualty incidents, one area that does receive some political and media attention is technology which assists interdiction efforts. (Foundation) Generally, these devices assist in the early detection of chemical, biological, or radiological releases into areas. The technology for these devices has improved to the point where they are small enough for individuals to carry and use and are easily implemented in any security system for soft targets such as schools, shopping malls, sporting events, hotels, and subway stations. (Detection) These five types of soft targets should be especially aware of the likelihood of chemical or biological attacks, since they have several of the key requirements to make such attacks feasible. (Detection) Despite knowledge of this vulnerability, it still has not been addressed properly due primarily to the lack of funding; many experts see

this as a major issue which will likely lead to the vulnerability being exploited by a terrorist organization in the future. (Cetron) Such devices could prove to be incredibly useful to managing and controlling the aftereffects of mass casualty incidents by allowing for a shift from scene intensive response to an incident level response more expeditiously. These devices would also assist in overall response since it would feasibly be possible to position extraction and decontamination teams at local hospitals earlier in order to assist with those victims who self-present, creating an overall more efficient response. (Scanlon) Unfortunately, chemical, biological, radiological or explosive detection devices are not a priority in civil budgets and instead are viewed more as a military expenditure since the military is the primary purchaser of these devices. In 2008, FEMA spent only \$6.5 million on radiological preparedness, an expenditure that includes detection devices. (FEMA) Compare this number to the nearly \$3 billion dollars that the Transportation Safety Authority spent in the same period for baggage screening devices and the inadequate scale of expenditure becomes apparent. (Office of Management and Budget) This pigeonholing of expenditure as either strictly military or strictly civilian seems likely another holdover from the budgetary views of civil defense dating back to the Cold War.

As our technology improves, our planning and training scenarios will also improve. The probability is that the current planning cycle will undergo alterations as computer simulations allow for greater levels of emergency incidents to be simulated from start to finish, allowing for real time, or sped up results of different actions to be viewed. (Simulation) One program that is currently available allows for hundreds of

users to be logged on at once, creating a real possibility for Fire, Police, Emergency Medical Service, Public Works, Community Emergency Response Team, Volunteer Organizations Active in Disasters, Emergency Managers, and other decision makers to see the simulated results of their actions and how they affect other organizations working the same incident. (Simulation) Such simulations fall outside the current exercise cycle, as they are more than tabletops and less than functional exercises. This type of virtual reality simulator is a technology that is currently in use with the military and is not deemed important enough for civilian protection despite the practical training applications that such devices offer to the first responder culture.

Useful technologies are not the only victims to budgetary cuts. Emergency management traditionally suffers from lack of funding, and in times of budget shortages, an emergency manager can expect his or her budget to be cut even more. One area that is no longer a priority in budgets is public education. (FEMA) This is ironic as the public education and awareness campaigns of Cold War civil defense was one of the few practices enacted that had a possibility of helping to save lives. The US government has maintained the same policy since the Cold War that people will need to fend for themselves for a period before government response will arrive, but no longer actively educates the population of this to the same extent as during the cold war. While the FEMA website does have some data and information on various types of disasters, this data is not very appealing in the presentation to users nor is the information often relevant. (FEMA) The government site [Ready.gov](https://www.ready.gov) has information on how to prepare readiness kits and other important information, but recent history, such

as the behavior of victims during Hurricane Katrina, has shown that much of the population is still painfully unaware that they are expected to fend for themselves following a disaster. If the federal government is going to continue to assert that response to any incident will be slow in arriving and that local jurisdictions are to fend for themselves, then a public awareness campaign similar to anti-drug messages or breast cancer awareness is necessary to ensure maximum preparedness and minimal loss of life. The message must be clear and stated repeatedly that no person should be waiting for the government to bring him or her water or other necessities directly following a disaster situation.

Preparedness efforts additionally need to be extended beyond the traditional scope of civil defense to include both the private sector and the educational sector. One area that would especially benefit from the inclusion of the private sector in emergency management would be anti-terrorism. The current parameters often keep a separation between businesses such as private sector information technology firms and emergency management. This lack of shared knowledge between business continuity programs and governmental continuity programs greatly affects how emergency managers address attacks or even view disasters. (Scheiner) Emergency managers can learn several valuable lessons from the information technology sector and its ongoing struggle against hackers including many parallels between the information technology managers' requirements and emergency managers' requirements. Both attempt to balance security with accessibility, and both are faced with enemies that are persistent and increasingly sophisticated in the delivery method of their destructive devices.

(Scheiner) Additionally, examination of the information technology sector reveals a flaw in our current funding priorities; often areas that have recently attacked receive a majority of the available funds, a classic case of fighting the last war. (Office of Management and Budget) One lesson that should be understood is that an enemy will strike locations not where fortifications and preparations exist, but where they do not.

(Scheiner) This is something that information technology managers face as a daily matter of course; terrorists, like hackers, are searching for vulnerabilities and backdoors of which to take advantage. If a location is secured against an active shooter, a terrorist could use a car bomb. If the location is secured against car bombs by building pylons, then a terrorist could still use a rocket-propelled grenade. If the location is made further secure by putting up a chain link fence then the would-be terrorist could resort to mailing explosives or strapping on a bomb and martyring themselves. Attacks rarely find themselves repeated the same way because we build up security in the previously attacked area and easier vulnerabilities exist to exploit. While much of this is slowly being absorbed into the general emergency management model, thanks in large part to a major increase in business continuity programs, it still has a long way to go from the militarized plans and thoughts from the early 1950s.

Another valid reason that the government will need to reach out and establish partnerships with the business community is due in large part to the previously established desire to evacuate large cities in the face of disasters or attacks, a practice shown to date back to Cold War era mentality. (W. Green) If the governmental response is going to achieve this goal successfully, then it becomes vital for public

officials to work in concert with the private sector, to ensure that gas stations, grocery stores, and hospitals have adequate staffing and goods stocked in order to assure that the resources needed for individuals to evacuate are available. Additionally, the reopening of businesses as soon as possible following disasters can dramatically affect the quality of life for those who choose to shelter in place or rush to return to their homes. This makes additional sense if the government does accept that there are individuals who will simply need to shelter in place as it is likely that at least some of those individuals will require access to these services once the threat has passed and it is safe to resume operating in the community. One cold war program that would actually be useful in times of disasters other than attacks would be the prepositioning of goods and supplies for community use during disasters. The Federal government does this with needed medical supplies in the form of the National Strategic Stockpile, but does not see it as necessary to do with bottled water or survival rations. Just as private drug companies manage the strategic stockpile, private companies could manage this strategic ration reserve.

Emergency Management would also greatly benefit from working more closely with other sectors such as Universities and the National Guard. One suggestion that would greatly improve national readiness is a requirement that all university graduates have certifications in basic first aid. This would help create a large cadre of potential responders to incidents. This idea is not new to emergency management and was the basic idea behind the creation of Community Emergency Response Teams, or CERT; however, this would be superior to CERT in that the numbers would be far greater.

Since most individuals in a disaster either self-present to hospitals or are initially treated and moved to hospitals by those who are not first responders, it would make sense to have as large of a portion of the population as possible knowledgeable about first aid and capable of making informed decisions. (Scanlon) Another way that overall response could be improved is by moving away from the faulty thinking that serves to keep civil governmental agencies from working alongside military groups such as the National Guard. Historically these groups have been left out of disaster planning, which has led to conflicts and incompatibilities in systems and procedures. One example of this is the way that MCI triage historically has been done in military training versus that done in civil training. (American Medical Association 3) It was not until the American Medical Association did an assessment that showed serious problems inherent in having a regional type triage systems that they chose to adopt the military model of triage. The acceptance of the military triage model as an overall superior model has created a national method of triaging patients and is bringing incompatibility with National Guard medical units to an end. (American Medical Association 1-4) Closer ties with these various groups would help to enact a cultural change amongst emergency managers, one that would allow for the addition of new thoughts and input on supposed best practices and will serve to strengthen the overall preparedness towards potential attacks and other hazards.

To address vulnerabilities to attack in a serious way will take a conscious shift from the Cold War era thinking that effective civil defense is something that can be accomplished cheaply. This desire to achieve something for nothing has seriously

diminished the capabilities of emergency management agencies to address several aspects of the four phases of emergency management, most noticeably those of mitigation and recovery. To a lesser extent, preparedness efforts are affected by the lack of funding while response agencies, primarily due to their visibility, have received a large amount of what little funding has been made available. (Security) That response agencies receive most of the available funding is true even with monies granted towards emergency preparedness, such as the emergency management preparedness grant program. One area where a sizable financial investment would be extremely beneficial is in mitigation. Mitigation has been shown to be the most cost effective way to handle disasters, but more governmental money goes towards response than mitigation, a practice that, in the long-term, is less than sustainable. (Security) In order to counter this paradigm, several experts recommend that the government invest \$2.5 billion dollars annually on mitigation projects, roughly what is spent annually by the Federal government on response. (Jane Bullock) These would be funded through disaster appropriations, tax-deductible contributions, a disaster stamp, and surcharges on flood insurance and other insurance policies. (Jane Bullock) This investment would go a long way towards lessening the severity of incidents that threaten civil populations, thereby saving important resources.

Perhaps the greatest payoff for emergency managers would be a reinvestment in recovery structure. The current paradigm relies far too heavily upon the resources and knowledge of volunteer organizations that are active in disasters, or VOAD. While VOAD groups offer wonderful assistance for many types of incidents, several indicators

show that they are perhaps inadequate for long-term recovery efforts due to the nature of such organizations and their funding methods. If the recovery effort following natural disasters, such as what occurred in New Orleans following Hurricane Katrina can stretch recovery capacity to the point where even four years later the recovery effort is being adjusted due to inadequacies, then doubts arise that such organizations are capable of dealing with the more serious effects of a chemical, biological, radiological, nuclear, or explosive attack. (Alpert) Moreover, these groups are not adequately trained in hazardous materials cleanup or radiological decontamination, a very real concern following an organized attack. In order to ensure that an adequate number of personnel are trained in the necessary skills to ensure a speedy recovery, the United States should look to a practice established by the Soviets and carried out by several other Asian countries. (Kearny 6-7) These countries maintain large groups that are tasked with decontamination and general recovery efforts following an incident. (Kearny 6) If the United States were to create a Federal Recovery Corps, it would greatly increase our preparedness for dealing with the consequences of potential attacks as well as accidental releases. Precedence exists for this idea, with a growing usage of military troops intervening in disaster situations, and plans to assign a permanent contingent of troops stationed within the United States. (Spencer Hsu A01) This group would serve to bolster recovery efforts such as debris removal, hazardous material removal, and decontamination of large-scale incidents as well as providing general recovery assistance to additional mass casualty incidents. These changes would represent a major shift towards the federal government taking the proactive stance that

the current system truthfully demands. Already we see a shift towards Federal awareness of the expected role that civilians demand with the creation of needed, prepositioned medical goods, referred to as the Strategic National Stockpile, but this is just the beginning of a needed investment in emergency management infrastructure.

(Control)

The challenges that the United States faces in the 21st Century grow exponentially as our technological complexity increases. Nonetheless, these same challenges offer us an opportunity to embrace new patterns of thinking and dispose of outdated and inadequate models and behaviors. By recognizing the changing nature of international politics with the addition of asymmetric warfare, emergency management is better prepared to understand the motivations and probable behavior of terrorist organizations, allowing for better preparedness and response capabilities. By recognizing the reality of potential attacks, emergency management is able to do away with ridiculous notions such as mutually assured destruction and therefore, will be capable of planning for the aftermath of real attacks. By understanding that real problems are inherent in our current systems, we can improve our overall metrics and create a better system, designed to respond to mass casualty incidents quickly and efficiently. By understanding that the public needs to be aware of their responsibilities before a disaster strikes and implementing a national educational and awareness campaign, emergency managers can create a better-informed populace that is capable of making informed decisions in times of crises. By recognizing that important lessons can be learned from business continuity professionals, emergency managers can

expand their knowledge of enemy behaviors and adopt practices that are more realistic. Finally, by understanding that civil defense is vital in an age where a strike on a city can occur at any point in time, and offering funding that is commensurate with that importance, the federal government can serve as the leader during incidents that the people require them to be. These steps would serve to improve our resilience to disasters and our capability to recover from events quickly and efficiently. Emergency management needs as a whole to move outside the historical behaviors that have existed since the beginning of the discipline and view outside organizations to see if they are performing behaviors that would better serve our civil populations. Over the long-term, the willingness to erase the board and start over that will best serve us during a period where our enemies consistently re-evaluate their plans and procedures.

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