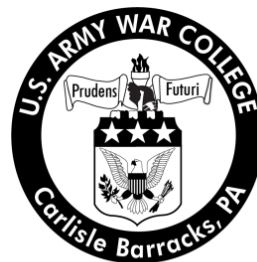


Strategy Research Project

Chemical, Biological, Radiological, & Nuclear Response Enterprise: A Way Ahead

by

Colonel Bret Van Camp
United States Army



United States Army War College
Class of 2012

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USAWC STRATEGY RESEARCH PROJECT

**CHEMICAL, BIOLOGICAL, RADIOLOGICAL, & NUCLEAR RESPONSE
ENTERPRISE: A WAY AHEAD**

by

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ABSTRACT

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The Department of Defense (DOD) or the Army does not build force structure specifically for Defense Support to Civilian Authorities (DSCA). After years of struggle and dozens of ill-fated attempts in response to a federally declared disaster of significant magnitude, the DOD has now developed a layered multi-component approach for response. This paper explores the utility and assessment of those current measures for responding to chemical, biological, radiological, and nuclear (CBRN) threats – considered the most complex form of civil support operations; and examines the sufficiency, efficiency, and effectiveness of the CBRN Response Enterprise (CRE). Further, the paper examines the utility of the Maneuver Enhancement Brigade (MEB) and its enduring mission requirement, not only for stability operations, but also here at home, in support of civil authorities during major disasters as one of the primary Active Component Federal DOD response options. Lastly, it will consider extrapolation beyond the limited function of CBRN response towards an improved response option across all DSCA and potential stability operations roles in answering the call toward a priority for 21st Century defense.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, & NUCLEAR RESPONSE ENTERPRISE: A WAY AHEAD

We cannot fail our fellow Americans when we respond to a disaster. ...we will be asked, at some point, to execute our mission on short notice. When that call comes, our fellow Americans will count on us...This is our most important mission!¹

—Lieutenant General (Retired) Guy Swan III

Although domestic response, according to Lieutenant General (Retired) Swan, former commander of 5th Army and Army North, is our most important mission, many could argue that the Department of Defense (DOD) has yet to adequately posture for Defense Support of Civil Authorities (DSCA). In their 2010 report, *Before Disaster Strikes*, the Rand Corporation, under a Federally Funded Research and Development Center contract to the DOD, led a team of experts under Congressional mandate, to study the issues associated with DOD response to a Chemical, Biological, Radiological, or Nuclear (CBRN) incident. The report was a mandate by law under the provisions of the National Defense Authorization Act of 2008.² This paper will capitalize on that report with further exploration toward the use of Maneuver Enhancement Brigades (MEB) as the apportioned Active Component response force to these incidents as well as extrapolation to other civil support incidents within the homeland and abroad during stability operations as well.

Strategic Documents

As the Rand led, Advisory Panel on Department of Defense Capabilities for Support of Civil Authorities After Certain Incidents (hereafter Advisory Panel) found, there are sufficient “statutory authority, directives, and other policy for a wide variety of DOD support activities” with regard to DSCA.³ Several laws exist detailing in broad

terms how the nation would respond to disasters. The most pertinent law concerning disasters is the Stafford Act; Public Law 93-288, originally signed in 1988, officially known as the Robert T. Stafford Disaster Relief and Emergency Assistance Act, or more informally, the Stafford Act. The Stafford Act and its amendments provide the legal basis for response during a major disaster. According to the Stafford Act, a “major disaster” means any “natural catastrophe, or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.”⁴ According to the Stafford Act, the Governor of the affected state must request Federal assistance and a Presidential emergency disaster declaration if a disaster is beyond the capabilities or capacities of the affected state. “Such a request shall be based on a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that Federal assistance is necessary.”⁵ Figure 1 demonstrates the emergency disaster declaration process.

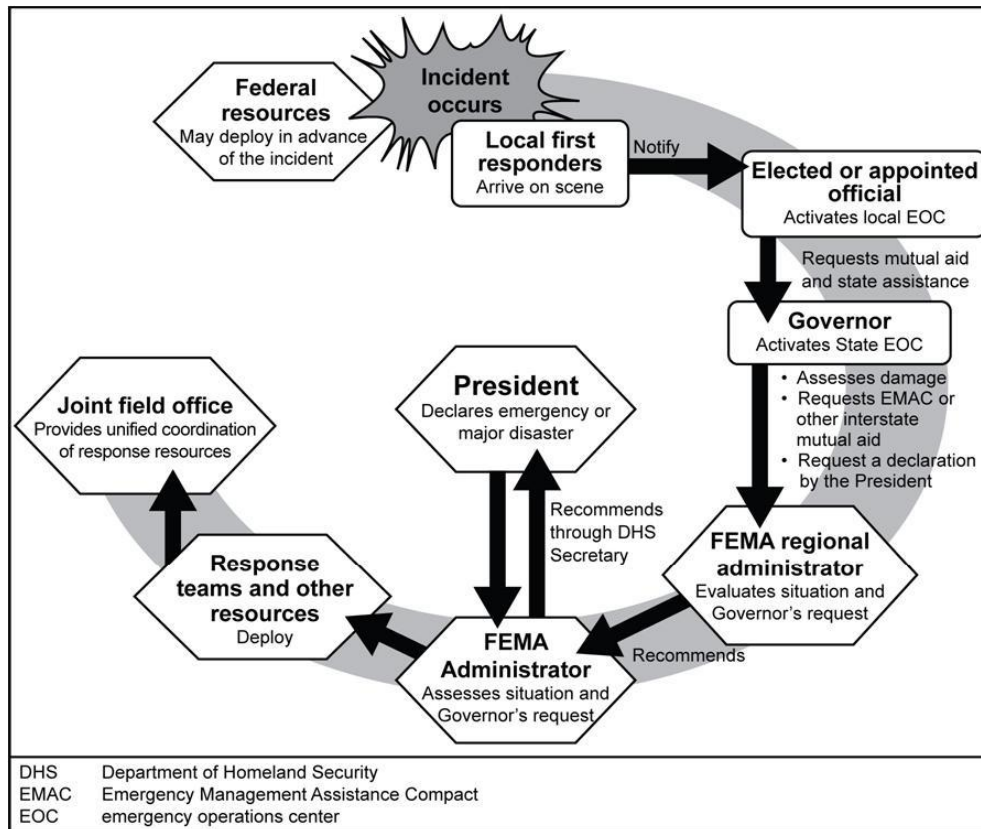


Figure 1: Emergency Disaster Declaration Process⁶

At the Federal level, after a request for support and Presidential declaration under the Stafford Act, the President may direct the Secretary of Defense to employ DOD assets to save lives, protect property and public health and safety, and lessen or avert the catastrophe via evacuations and warnings.⁷ More discussion follows later on this process and other tools available to a state Governor in responding to a disaster.

To alleviate confusion regarding DSCA, there exist other laws besides the Stafford Act. These laws date back to the dawn of the United States, with the inclusion of Article I, section eight of the United States Constitution, which provides for the raising of an Army and to “to provide for calling forth the Militia to execute the Laws of the Union...”⁸ The Insurrection Act governs the ability of the President to deploy the military

within the United States to put down insurrection and rebellion. Congress amended the wording of the 1807 Insurrection Act in 2006 as part of its National Defense Authorization Act generated as a result of Hurricane Katrina by including natural disaster, epidemic, or serious public health emergency as conditions for Presidential military deployment within the U. S. The following year, Congress overturned the 2006 modification to the Insurrection Act. The oft confused, Posse Comitatus Act incites misunderstanding as an obstacle for DSCA operations. Posse Comitatus was a result of the post-Civil War Reconstruction period, making it illegal to use the military to execute the laws. Within the Act, Congress provided itself exceptions to Posse Comitatus and has done so for disaster relief, counterterrorism, and prevention and response for weapons of mass destruction.⁹ These laws generally deal more with use of Federal military forces as policing units born of fear of occupation. There is also the Economy Act; however, it deals with how Federal departments assist each other in paying for the response to a disaster. Though certain aspects of each of these laws are important during a disaster, they are not the focal point of this paper. What is relevant is that “existing authorities for Defense Support of Civil Authorities are robust and no major new authority is required.”¹⁰

Turning from statutory requirements and delving into strategic guidance for DSCA, there are a host of guidance documents for the DOD from the President on down. The 2010 National Security Strategy (NSS) addresses the “need to strengthen reactive capacity for managing the potential range of threats and hazards, which include terrorism, natural disasters, large-scale cyber attacks, and pandemics.”¹¹ Specifically on response, President Obama declared, “We are building our capability to prepare for

disasters to reduce or eliminate long-term effects to people and their property from hazards and to respond to and recover from major incidents. It is critical that we continually test and improve plans using exercises that are realistic in scenario and consequences.”¹² In addition, on March 30, 2011, President Obama signed Presidential Policy Directive 8 (PPD-8), *National Preparedness*. This directive replaces Homeland Security Presidential Directive 8 (HSPD-8), *National Preparedness*, issued December 17, 2003, and its Annex I (National Planning), issued December 4, 2007. PPD-8 dictates overall better preparedness for actions within the Homeland. It states that the national preparedness goal shall “define the core capabilities necessary to prepare for the specific types of incidents that pose the greatest risk to the security of the Nation, and shall emphasize actions aimed at achieving an integrated, layered, and all-of-Nation preparedness approach that optimizes the use of available resources.”¹³ From the DOD perspective, the Quadrennial Defense Review (QDR) for 2010 specified a change in the method for responding to a domestic consequence management incident, to “field faster, more flexible consequence management response forces” to save lives and protect property.¹⁴ The 2010 QDR specifies the development of Homeland Response Forces (HRF) based on existing National Guard structure in each of the ten Federal Emergency Management Agency (FEMA) regions to speed reaction. “These ten HRF will provide a regional response capability; focus on planning, training, and exercising; and forge strong links between the Federal level and State and local authorities.”¹⁵ The latest National Military Strategy echoes these 2010 strategy documents as well;

In response to an attack, cyber incident, or natural disaster, we will focus on rapidly providing planning, command and control, consequence

management, and logistics support to the Department of Homeland Security, state and local governments, and non-governmental organizations. We will continue to dedicate, fund, and train a portion of the National Guard for homeland defense and defense support of civil authorities.¹⁶

There are also at least seven key DOD Directives that relate to DSCA, however, as the Advisory Panel found, “DOD guidance for all forms of Defense Support of Civil Authorities is fragmented, incomplete, and outdated.”¹⁷ One of the Advisory Panel’s urgent recommendations is the consolidation of all DOD guidance.¹⁸

The combatant commander charged with response within the United States is Commander, U. S. Northern Command (NORTHCOM). The NORTHCOM Contingency Plan 3500 cites as references, the FY12-16 Defense Planning and Programming Guidance and Resource Management Decision 700. These state; “Defend the U.S. and support civil authorities at home. The first responsibility of a government is to protect the lives and safety of its citizens”, and “The DOD response to significant or catastrophic incidents requires (and the public and civil authorities expect) trained, equipped and ready forces respectfully.”^{19 20} Lieutenant General William Caldwell IV, Commander, U. S. Army North, related in his assumption of command speech, “Our missions-Homeland Defense, Defense Support of Civil Authorities, and Security Cooperation-are a no fail sacred trust to the American people.”²¹

Method: National Response Framework

How does the Federal government plan to respond once requested? The system of response is the National Response Framework (NRF). The NRF supersedes the former National Response Plan, by focusing efforts less on development of an actual plan as opposed to a framework within which to operate. A key concept of the NRF is that effective, unified national response requires layered, mutually supporting

capabilities. The NRF focuses exclusively on response and short-term recovery and dealing directly with roles, responsibilities, and actions required to achieve effective national response against all hazards. The NRF provides the basis for Federal support to local and State governments in the event of a disaster, which outweighs the capability or capacity of the local/State response. The NRF “is a guide that details how the nation responds to all types of disasters and emergencies. It establishes a comprehensive, national, all-hazards approach to domestic incident response principles, as well as the roles and structures that organize national response.”²² The NRF also exists to synchronize government-wide efforts to respond to a national level crisis or event. The NRF designates various Federal departments as the lead agency for each of the 15 Emergency Support Functions (ESF). Each ESF has a lead Federal coordinating agency, primary support agency, and support agencies. The DOD is not a lead agency in any of the support functions, but serves as a supporting effort across all, except for the Corps of Engineers, whose roles and missions are beyond the scope of this study. The ESF “provide the structure for coordinating Federal interagency support for a Federal response to an incident. They are mechanisms for grouping functions most frequently used to provide Federal support to States and Federal-to-Federal support, both for declared disasters and emergencies under the Stafford Act and for non-Stafford Act incidents.”²³ Delineated in Table 1 below are the ESF.

ESF	Federal Coordinator	Scope
ESF #1 – Transportation	Department of Transportation (DOT)	Aviation/airspace management and control Transportation safety Restoration/recovery of transportation infrastructure Movement restrictions Damage and impact assessment
ESF #2 – Communications	Department of Homeland Security (DHS)/FEMA	Coordination with telecommunications and information technology industries Restoration and repair of telecommunications infrastructure Protection, restoration, and sustainment of national cyber and information technology resources Oversight of communications within the Federal incident management and response structures
ESF #3 – Public Works and Engineering	DOD/Corps of Engineers	Infrastructure protection and emergency repair Infrastructure restoration Engineering services and construction management Emergency contracting support for life-saving and life-sustaining services
ESF #4 – Firefighting	Department of Agriculture/US Forest Service	Coordination of Federal firefighting activities Support to wild land, rural, and urban firefighting operations
ESF #5 – Emergency Management	DHS/FEMA	Coordination of incident management and response efforts Issuance of mission assignments Resource and human capital Incident action planning Financial management
ESF #6 – Mass Care, Emergency Assistance, Housing, and Human Services	DHS/FEMA	Mass care Emergency assistance Disaster housing Human services
ESF #7 – Logistics Management and Resource Support	General Supply Agency & DHS/FEMA	Comprehensive, national incident logistics planning, management, and sustainment capability Resource support (facility space, office equipment and supplies, contracting services, etc.)
ESF #8 – Public Health and Medical Services	Department of Health & Human Services	Public health Medical Mental health services Mass fatality management

ESF	Federal Coordinator	Scope
ESF #9 – Search and Rescue	DHS/FEMA	Life-saving assistance Search and rescue operations
ESF #10 – Oil and Hazardous Materials Response	Environmental Protection Agency	Oil and hazardous materials (chemical, biological, radiological, etc.) response Environmental short- and long-term cleanup
ESF #11 – Agriculture and Natural Resources	Department of Agriculture	Nutrition assistance Animal and plant disease and pest response Food safety and security Natural and cultural resources and historic properties protection and restoration Safety and well-being of household pets
ESF #12 – Energy	Department Of Energy	Energy infrastructure assessment, repair, and restoration Energy industry utilities coordination Energy forecast
ESF #13 – Public Safety and Security	Department Of Justice	Facility and resource security Security planning and technical resource assistance Public safety and security support Support to access, traffic, and crowd control
ESF #14 – Long-Term Community Recovery	DHS/FEMA	Social and economic community impact assessment Long-term community recovery assistance to States, local governments, and the private sector Analysis and review of mitigation program implementation
ESF #15 – External Affairs	DHS	Emergency public information and protective action guidance Media and community relations Congressional and international affairs Tribal and insular affairs

Table 1: National Response Framework Emergency Support Functions²⁴

The Department of Homeland Security (DHS) through its subordinate, FEMA, coordinates the Federal response via the ten regional FEMA headquarters. The FEMA uses the NRF by leveraging the ESF for federal response and provides this support in

conjunction with the core competencies of the NRF. These crosscutting competencies include:

- Situational Assessment
- Public Messaging
- Command, Control, & Coordination
- Critical Communications
- Environmental Health & Safety
- Critical Transportation
- On-Scene Security and Protection
- Mass Search and Rescue Operations
- Health and Medical Treatment
- Mass Care Services
- Public & Private Services & Resources
- Stabilize and Repair Essential Infrastructure
- Fatality Management Services

These core competencies represent the highest priority essential functions necessary for both saving and sustaining lives, and stabilizing the site and the situation within 72 hours. Of these, the DOD anticipates support requirements to provide critical communications, on-scene security and protection, mass search and rescue operations, and health and medical treatment. It can also rapidly assist in situational assessment and command, control, and coordination.

To facilitate DOD support in a response, the Department established Defense Coordinating Elements (DCE) in each of the ten FEMA regions. An Active Component

Army Colonel, the Defense Coordinating Officer (DCO), leads these offices, assisted by a six to twelve person operational and support staff. The DCO is the DOD's single point of contact within a FEMA Regional headquarters who pre-coordinates and provides initial validation of Mission Assignments received from the Federal Coordinating Officer (FCO). Prior to Hurricane Katrina, the Colonel holding the DCO position was usually dual-hatted into the position and was not always from the Active Component. The DCO functions were typically a collateral duty of specified brigade level commanders. The same was true of the DCE. Lessons learned in the wake of Katrina changed that by making the DCO position a full-time, primary duty usually filled by a former brigade commander with requisite permanent, full-time DCE personnel.

The CBRN Response Enterprise (CRE)

As part of the 2010 QDR, the DOD began reorganizing its three "Chemical, Biological, Radiological, and Nuclear (CBRN) Consequence Management Response Forces (CCMRF) to enhance their lifesaving capabilities, maximize their flexibility, and reduce their response times."²⁵ "To address the potential for multiple, simultaneous disasters, the second and third CCMRF will be replaced with smaller units focused on providing command and control and communications capabilities for Title 10 follow-on forces."²⁶ This new collective structure is the CBRN Response Enterprise or CRE.

The CRE is a multi-component, layered approach designed to rapidly deploy and employ to save lives, minimize human suffering, mitigate the effects of CBRN environments, and maintain public confidence. The CRE seeks to achieve greater unity of effort between agencies and provide greater flexibility during CBRN incident response. Figure 2 relates the components of the CRE; the various capabilities brought to bear, the concept of employment over time, and illustrates a notional employment

scenario. Explanations of functions found within Figure 2 are explained below. Of significance is that the CRE is now more regional than its predecessors, allowing a more rapid response time to incidents of national significance.

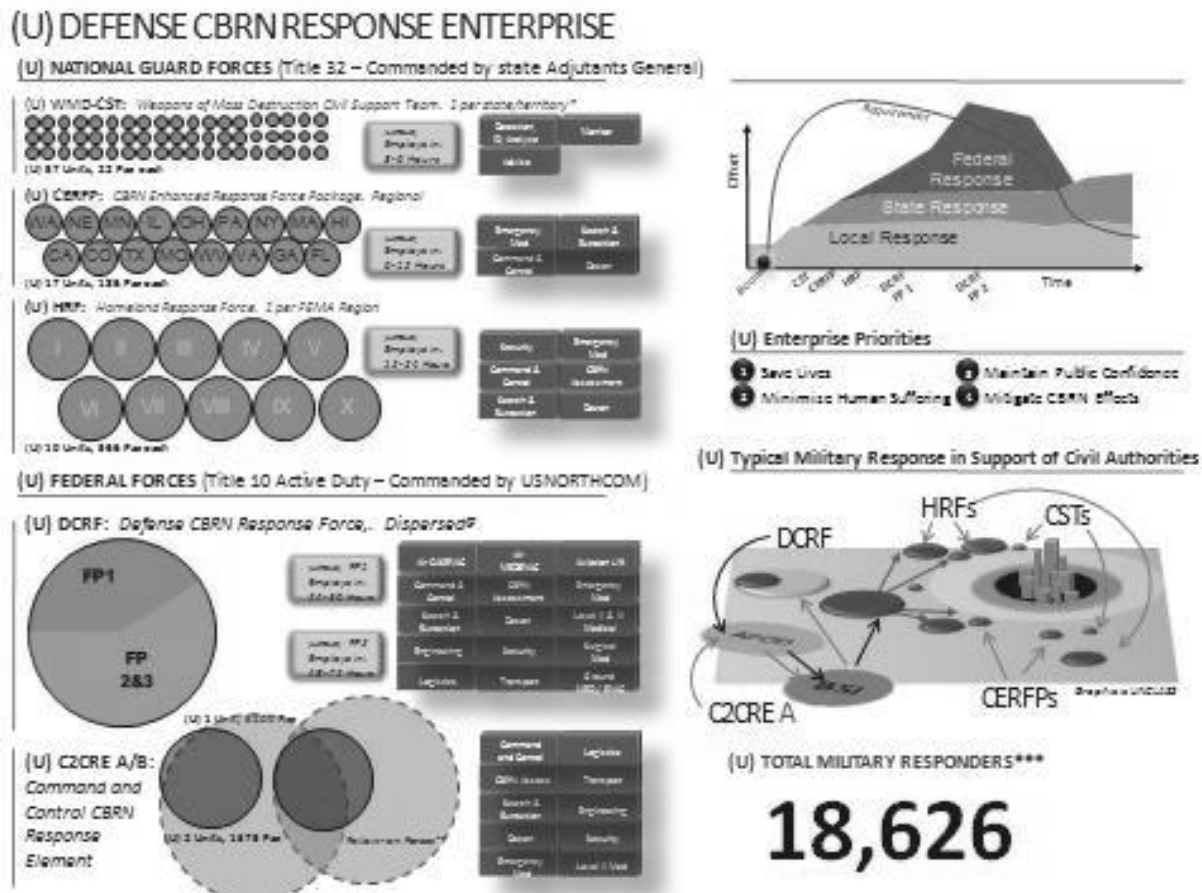


Figure 2: Chemical, Biological, Radiological, & Nuclear Response Enterprise²⁷

Should a CBRN event occur, the first DOD-related response is the state National Guard forces in the form of a Weapons of Mass Destruction-Contingency Support Team (WMD-CST). These 22 Soldier units' primary responsibility is to provide technical advice, to identify and analyze the hazard, and monitor the environment and provide an immediate response capability within their respective states. There are 57 WMD-CST;

at least one in every state and territory in the United States with two in both New York and California.

If the scale and scope of the event warrant, the next response force is the CBRN Enhanced Response Force Package (CERFP). These 186 Soldier units, located in 17 different states (Figures 2 and 3) provide search and rescue, decontamination, and emergency medical capabilities. Because these units are not located in every state or FEMA region equitably, employment of these State assets is dependent on mutual aid agreements known as an Emergency Management Assistance Compact (EMAC), which are pre-coordinated inter-state agreements between the Governors of States that provide cross state capabilities in time of need.

The Homeland Response Force (HRF) is the next tier. Units with this mission set have geographical alignment, one per FEMA Region, with subordinate formations dispersed within the same FEMA Regional boundaries. By the end of FY12, there will be ten total HRF, each with 566 personnel. Only two have reached Full Operational Capability to date--those in the States of Washington and Ohio. The other eight states that will have HRF are California, Utah, Texas, Missouri, Georgia, Pennsylvania, New York, and Massachusetts. Figures 2 and 3 provide scale and spatial orientation of CERFP and HRF. The HRF increase capacity by providing the same capabilities as a CERFP with the addition of a security element, enhanced logistics, and more robust command and control. The HRF design provides a regional command and control element for up to five CERFP and nine WMD-CST elements.²⁸ National Guard units selected as part of the HRF remain under the direction and control of the Governor of the State in which they reside. As Figure 3 relates, every major metropolitan city (the

most densely populated areas) has coverage in terms of quick response between either a CERFP or HRF, or both. To remain clear, HRF are not units; it is a mission, potentially rotational in nature, just as Title 10 forces currently rotate for their missions.

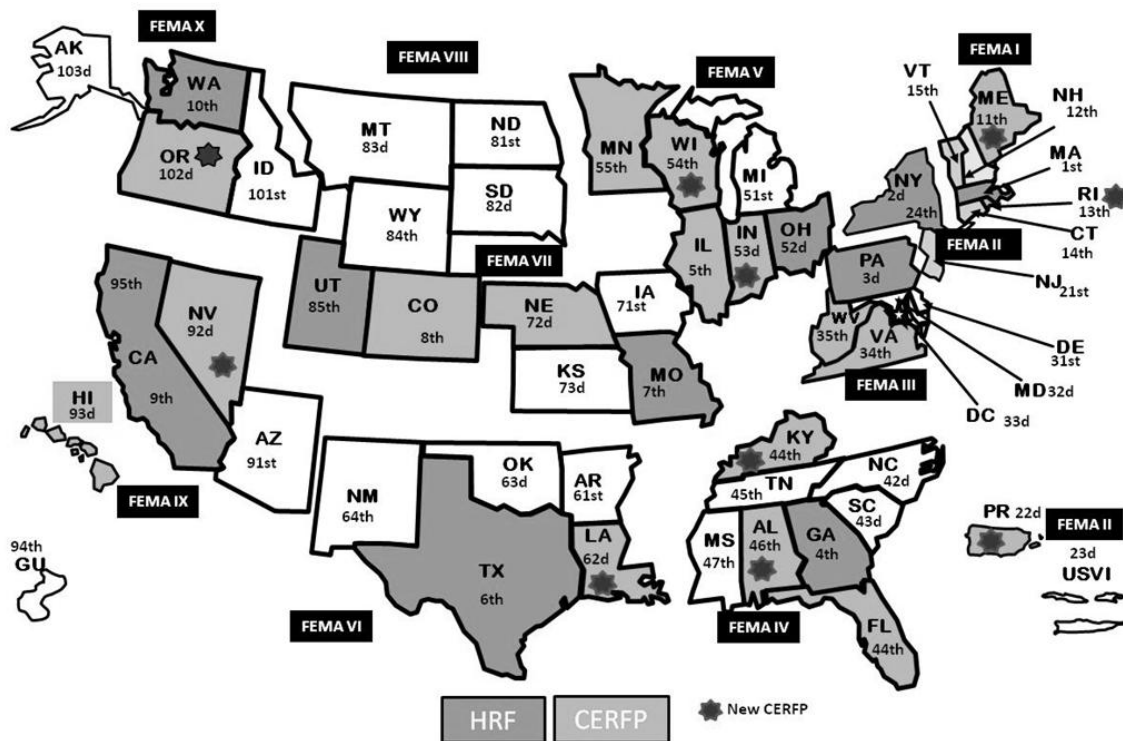


Figure 3: Locations of CERFP and HRF²⁹

Initial military response to this point consists of National Guard forces from the affected state. A State Governor can employ these units without having a Presidential disaster declaration, providing the forces are within control of the Governor or respond commensurate with an EMAC from a neighboring state. If the disaster is such that it overwhelms a state's capability to respond, the Governor may seek a Presidential emergency or disaster declaration as described previously in Figure 1.

Under the CRE construct, if warranted by the President, Active Component forces are next to employ, under direction of the President or Secretary of Defense. In the case of a CBRN incident, it is the Defense CBRN Response Force (DCRF). The DCRF is a 5,200 person unit established as a Joint Task Force (JTF) under the command and control of the standing JTF headquarters, JTF-Civil Support, whose mission is to save lives, mitigate human suffering, and facilitate recovery operations in a CBRN environment, or under a NORTHCOM designated JTF. The DCRF improves capabilities and capacities by inclusion of an aviation task force equipped with rotary wing lift, Medical Evacuation (MEDEVAC), and Casualty Evacuation (CASEVAC) capabilities; a medical task force with ground evacuation, Level II (basic primary care with limited bed space) and III trauma care and surgical capabilities (mobile hospital); a task force for logistics support and sustainment; and Task Force Operations, currently formed around the capabilities of an Active Component MEB. The MEB as Task Force Operations, brings additional engineer, military police, and CBRN capabilities in addition to its own logistics and signal capabilities for self-sustainment. Larger than those non-organic enabling capabilities, the MEB brings to bear functional expertise within its headquarters and the ability to conduct command and control of differing enabling forces. In addition to the DCRF, and if warranted, the flexibility of the concept also calls for and sources two contingency command and control units known as C2CRE (Command and Control CBRN Response Element); known as A and B, respectively. These form the headquarters under which follow on forces would fall in a command and support relationship. These follow on forces, sourced through the request for forces

(RFF) process, provide additional capabilities as warranted. However, what scope and scale would warrant such a response?

Triggers, Scale, and Scope

Triggering events to elicit response by the CRE include catastrophic or significant CBRN incidents. Northern Command defines these as:

Catastrophic CBRN Incident: Any natural or man-made CBRN incident, including terrorism, which results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic incident requires long term rebuilding and revitalization (extracted from the National Response Framework) (i.e., 10kT nuclear detonation).³⁰

Significant CBRN Incident: Any natural or manmade CBRN incident, including terrorism that exceeds local, State, and civilian Federal response capabilities requiring significant DOD support.³¹

In his research for a Masters in Military Arts and Science, Major Nikolas Dall analyzed the scale and scope of three different CBRN events: The 2001 Anthrax letters here in the U. S., the 1995 Tokyo subway Sarin release, and the 1986 Chernobyl accident. By overlaying the current CRE on these situations and through his analysis, he found that DOD response was appropriate to each of these different scales. However, if you seen one disaster, you have seen one disaster; no two are alike. One key finding discovered is that the Army should adopt a model similar to the United States Marine Corps (USMC) Chemical, Biological Incident Response Force (CBIRF): a standing organization with the sole mission of responding to a CBRN event, either in the National Capital Region (NCR) or abroad.³² This same argument was echoed by Christine Le June in her article, “Consequence Management; Steps in the Right Direction”.³³ Le June, citing Former Assistant Secretary of Defense for Homeland Defense Paul McHale, related as one of her findings, McHale’s main criticism of the

construct, “the Title 10 CBRNE units would need to be assembled ad hoc and may never have trained jointly under NORTHCOM, leading to a less unified and effective response” presumably primarily due to the rotational aspect of elements of the DCRF.³⁴

Litmus Test - Hurricane Irene

For a CBRN event of sufficient scope and scale, CRE employment is a tailorable response to the incident. The Active Component force, the DCRF, is a component of that flexible, tailorable response. However, this is not automatic. A train derailment containing chlorine gas (the first family of chemical warfare agent) does not necessarily warrant the employment of DCRF forces. At the other extreme, Hurricane Irene in 2011 had the DOD poised for support, although it was not a CBRN event.

Hurricane Irene proved the abilities of the DOD in preparation of a looming disaster. In one of his press releases prior to the arrival of the hurricane, Secretary of Defense Leon Panetta related that three military bases would be designated Incident Support Bases (ISB) from which relief efforts and supplies could deploy. In addition, eight helicopters moved from Fort Stewart, Georgia to Fort Drum, New York while ten were aboard the USS Wasp in order to airlift supplies, equipment, and to evacuate personnel as required.³⁵ Why was this course selected instead of civil support trained CRE forces? Elements of nine of the ten DCE prepositioned along the eastern seaboard prepared to conduct coordination for DOD response. Concurrently, the annual NORTHCOM *Vibrant Response* exercise was ongoing in Indiana. Command and control elements of the CRE, training in Indiana, shifted focus from training to a real world mission and moved to pre-position areas in the northeast. These included JTF-Civil Support, JTF-51, the ARNORTH Contingency Command Post, and elements of the 167th Sustainment Brigade, for theater opening. On top of this, the concept of dual

status commanders was for the first time, employed. Dual status commanders can direct both Federal active-duty forces and state National Guard forces in response to domestic incidents. They ensure that state and Federal military forces work effectively together, when states request Federal assistance, and DOD supports the response. The President designated four initial dual status commanders along the eastern seaboard, the area affected by the hurricane in anticipation of support requests along the hurricane's projected landfall path.

Problem

Given the laws and the myriad of guidance for DOD response in support of DSCA, the question begs why it is still a "pick-up" game. As this guidance filters down from the national level to the level of execution, the Department has failed to capitalize on this enduring requirement to proclaim a standard tactical structure to support civil support operations. The Army continues to use its Army Force Generation (ARFORGEN) model vice a standing, professional force structure specifically aimed at civil support operations. This mission set, seen as an economy of force mission, could become the main effort when disaster strikes. Evidence of this is demonstrated in Le June's analysis,

As has been outlined, the challenges to consequence management are complex and enduring yet critically important to U.S. National security. Until plans and policies proactively match resources to this vital aspect of national security, the United States risks finding itself in a disaster of its own making.³⁶

In addition, and because of similarities between civil support operations and stability operations, that same force can be utilized beyond our nation's borders, during theater security cooperation, building partnership capacity, humanitarian assistance/disaster response, or as designed, during conflict. As reflected in the National Military Strategy,

“Readiness must remain a top priority, as our forces, systems, and capabilities will continue to be under extraordinary stress. Readiness is the ability to provide and integrate capabilities required by Combatant Commanders to execute their assigned missions.”³⁷ Focusing now on the specifics of the DCRF mission, and, more importantly toward the capabilities brought to bear by a subordinate, multi-functional brigade structure within the DCRF, the MEB, the argument becomes maintaining a MEB for DSCA operations.

Maneuver Enhancement Brigade (MEB) Specific

The MEB is ideally suited as the force structure for civil support operations or stability operations. However, the relatively new design is only now coming of age and recognized as a tremendous asset for these operations. The capabilities it brings are the exact capabilities required for operations in support of civil authorities. It is therefore a formation with an enduring mission, especially in the homeland. However, given the fiscal constraint of forces today, only two MEBs exist in the Active Component.

The MEB is a unique multi-functional command and control (C2) headquarters to perform maneuver support, consequence management, stability, and support area operations to the supported force. The headquarters provides greater functional staff (enabler) capability than Brigade Combat Teams. The primary difference between the MEB and a functional brigade (Engineer, Military Police (MP), and CBRN as examples) is the breadth vice the depth of the MEB’s multifunctional staff. By design, the MEB is a flexible, tailorable organization that can task organize depending on the mission or operational environment. As the Army doctrinal manual, Field Manual 3-90.31, *Maneuver Enhancement Brigade Operations*, relates and Figure 4 illustrates, “A MEB typically includes a mix of several types of battalions and separate companies which

may include Civil Affairs (CA), CBRN, engineer, explosive ordnance disposal, and MP units. It may also contain military intelligence and a tactical control force.”³⁸

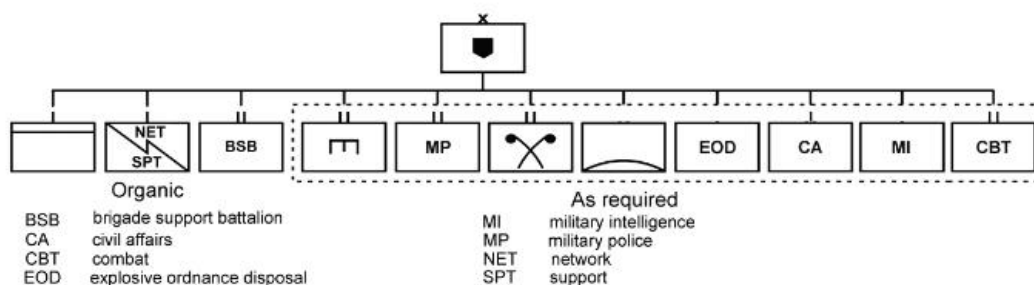


Figure 4: Maneuver Enhancement Brigade task organization example³⁹

Though there are no organic subordinate battalion formations within the MEB, except for a Brigade Support Battalion, the MEB has the most robust multi-functional staff of any other brigade-sized element. The structure of the MEB headquarters allows the greatest applicability for mission command of units with consequence management missions, foreign or domestic.

The current mission of the 1st MEB as Task Force Operations as a component of the DCRF is to deploy and establish a Brigade Task Force in the JOA (Joint Operational Area) and execute CBRN Consequence Management (CM) operations in support of civil authorities in order to save lives, mitigate human suffering, and facilitate recovery operations in a CBRN environment.⁴⁰

Figure 5 depicts the task organization of Task Force Operations. As indicated by the asterisks, only a handful of the Task Force is actually co-located with the Brigade headquarters at Fort Polk, Louisiana. The non-organic Army structure of the mission, begs the question of true readiness and cohesion. Indeed, the subordinate formations rotate annually under Task Force Operations per ARFORGEN. The costs associated

with training and evaluation/certification warrant a review during this time of economic friction.

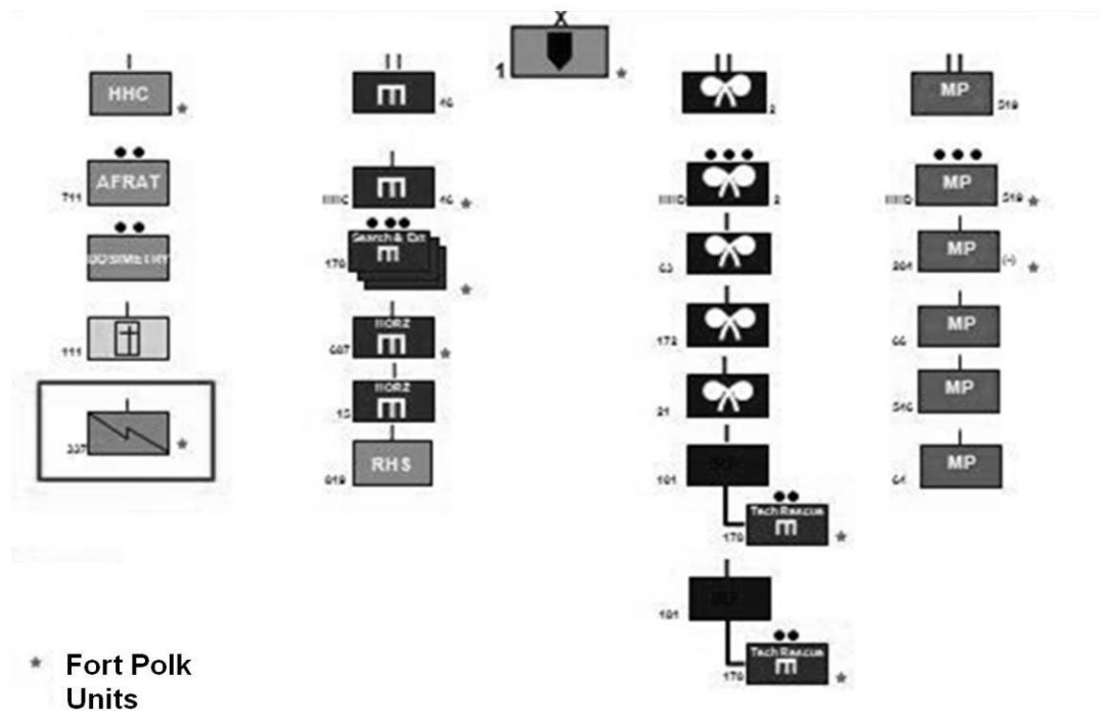


Figure 5: Task Force Operations Task Organization⁴¹

Stability Operations vs. Civil Support Operations

Stability operations and civil support operations are very similar from a U. S. Army perspective. The key differences involve domestic law, the interagency process available in the United States and rules regarding the use of deadly force. Both of these operations revolve around and focus on the civilians in the operational environment. Both stability and civil support tasks require Army forces to provide essential services and work with civilian authorities.⁴²

Civil support operations are the fourth part of the Army's full spectrum operations.

Field Manual 3.0, *Operations*, states,

Army forces combine offensive, defensive, and stability or civil support operations simultaneously as part of an interdependent joint force to seize, retain, and exploit the initiative, accepting prudent risk to create opportunities to achieve decisive results. They employ synchronized action—lethal and nonlethal—proportional to the mission and informed by a thorough understanding of all variables of the operational environment.⁴³

Civil support operations encompass support provided by the Army to civil authorities within the United States and its territories.⁴⁴ This is a total force mission. It includes all components: Active, Reserve, and National Guard. Army Field Manual 3-28, *Civil Support Operations*, relates, "Although not the primary purpose for which the Army is organized, trained, and equipped, civil support operations are a vital aspect of the Army's service to the Nation."⁴⁵ The four primary civil support tasks are: 1) Provide support for domestic disasters; 2) Provide support for domestic chemical, biological, radiological, nuclear, or high-yield explosives incidents; 3) Provide support for domestic civilian law enforcement agencies; and 4) Provide other designated support.⁴⁶ Based on these definitions of Civil Support, the conclusion is that it is incumbent on the Army (and DOD) to utilize its trained force for the benefit of the American people to alleviate pain and suffering during a catastrophe first and foremost. Not every civil support mission requires a large operation, however. Often the support provided may consist of only a small element; for example a dive team such as the element that responded to the 2007 Minneapolis Interstate-35 bridge collapse.⁴⁷ Aside from these precision capabilities, most civil support tasks are grander in scale. The bridge example above falls into the latter category of civil support tasks, while the most dangerous, most complex task, deals with incidents involving weapons of mass destruction.

Comparing the Army's Universal Task List (AUTL) Army Tactical Tasks (ART) for stability operations and civil support operations, a full 77% are applicable to both stability operations and civil support operations. Only 22% of those tasks are strictly stability operations tasks; the majority of those exist due to an adversarial threat or restrictions of intelligence due to U.S. Law. Only five tasks (<1%) are strictly civil support tasks; they are:

- Conduct Homeland Security Personnel Recovery Operations
- Provide EOD Support to the Defense Environment Restoration Program
- Provide EOD Support to Homeland Security Operations
- Provide EOD Support to the Secret Service
- Provide other support as required⁴⁸

Army Tactical Tasks are those tasks which measure a unit's readiness against a prescribed task list within the unit mission. They describe the task to accomplish, the conditions under which to accomplish the task, and the standard or measure of performance of the task. The tasks are a component of the hierarchy of tasks ranging from the joint strategic level through the tactical level down to individual and leader tasks.

Maneuver Enhancement Brigades are capable of operating across full spectrum operations to support, reinforce, or complement offensive and defensive major combat operations and can support or conduct stability or civil support operations.⁴⁹ In addition, MEBs may have an area of operations, control terrain, and, besides supporting the Army, can also support the joint force. Its key tasks are maneuver support, support area, consequence management, and stability operations. With the MEB, the DOD has

a brigade level headquarters ideally suited for these operations. At issue however, are the lack of organic subordinate formations and the cost of rotating those subordinate rotations for these mission areas.

Cost

From a response perspective, the average overall annual cost of Federal disaster relief from 1999 to 2010 was \$3.5 billion.⁵⁰ This discounts the costs of the events of 9/11 and Hurricane Katrina. “Hurricane Katrina expenses that DOD billed to the Federal Emergency Management Agency exceeded five billion dollars.”⁵¹ President Obama put it succinctly, “The United States Government has an obligation to make the best use of taxpayer money, and our ability to achieve long-term goals depends upon our fiscal responsibility. A responsible budget involves making tough choices to live within our means; our national security goals can only be reached if we make hard choices.”⁵² As a starting point, the DOD reprogrammed the fiscal year (FY) 11-15 budget for DSCA and added nearly \$453 million. This increase allowed for establishment of the ten HRF and sent the total funding to \$5.88 million.⁵³

Every year, NORTHCOM requires individual and unit training/equipping, technical assistance visits (including lanes training), and ARNORTH validation of the units via a command post exercise or field training exercise, (i.e. *Vibrant Response*).⁵⁴ In only one example of individual training requirements, that of technical rescue, NORTHCOM, in its Contingency Plan 3500, requires level 2 search and rescue teams within the DCRF and C2CREs.⁵⁵ Level 2 certification is a higher level of competency than initial level 1 certification. Contingency Plan 3500 however, does not specify on which of the nine disciplines to focus. Those nine disciplines are: Rope Rescue, Surface Water Rescue, Vehicle and Machinery Rescue, Confined Space Rescue, Structural

Collapse Rescue, Trench Rescue, Subterranean Rescue, Dive Rescue, and Wilderness Rescue.⁵⁶ To become a level 1 technician requires a core block of instruction plus the specific discipline. To achieve level 2 requires that plus more training on the specific discipline. Above the individual level, at the collective level, ARNORTH allocates four major training exercises annually across the breadth of its responsibilities and missions. This constraint exacerbates the ability to bring together the CRE in a JIIM (Joint, Interagency, Intergovernmental, and Multinational) environment to actually rehearse and prepare.

Rotating units annually per the current ARFORGEN rotational cycle does a couple of things. First, it means a Soldier is unavailable for that specific period for individual training/certification. Economically, it requires annual sunk costs in obtaining that certification. Because only a select number are able to attend, it limits the unit capacity due to the costs associated with the training. Lastly, it exacerbates tumultuous collective training schedules. While ARFORGEN provides some predictability in unit rotation, current annual rotation is not cost effective. Annually, training individuals for the DCRF costs the DOD hundreds of thousands of dollars; annual rotation of units compounds the problem. A better approach is not rotating forces annually, but maintaining units on a two-year ready cycle. Though this approach opposes the ARFORGEN cycle, it lowers the overall economic costs associated with the requirement. As stipulated in the National Military Strategy, “as we adjust to these [budget] pressures, we must not become a hollow force with a large force structure, lacking the readiness, training, and modern equipment it needs.”⁵⁷

Recommendations

Though the CRE has yet to employ absent of training events, it appears to provide the needed response, at least in concept and rudimentary planning. However, its applicability beyond CBRN events is worthy of more study. Analysis of the tasks associated with the CBRN response will lead one toward the application of the CRE to other civil support operations tasks, beyond CBRN related tasks, and also overseas, toward stability operations tasks. The anticipation of Hurricane Irene demonstrated the flexibility and layered approach of civil support concepts; however, the actual force used in anticipation was not the CRE beyond the local level.

Use the CRE beyond a CBRN environment. Though a CBRN environment is complex, forces associated with the CRE undergo outstanding training for support operations in the event of any disaster; not just CBRN disasters. Moreover, those same skill sets are apropos for stability operations. From an economic perspective, including training costs and economies of force, give consideration to utilizing these enabling forces for all civil support or stability operations.

Man, train, and equip the Active Component MEB for the DSCA mission and the broader civil support and stability operations. The MEB is the optimal organizational structure from which to audible. Because of the similarities of stability operations and civil support operations, an organically manned brigade is capable of both domestic and foreign support. Retain organically, the subordinate formations (battalions and separate companies) of the MEB, just as a Brigade Combat Team has its subordinate organic formations. This lowers overall training costs, builds cohesion within the brigade, and facilitates response. Cycle future Active Component battalion and smaller formations on a biannual basis vice annually to recognize cost savings and increased return on

investment. Organizational constructs must change to fully support stability and support operations. These two involve cooperative activities during “peacetime” or the shaping phase or in response to crises to build national interests or alleviate suffering. Military capabilities applied in these operations is faster acting than other forms of national power, and done properly through theater security cooperation or in building partnership capacity, may avert war and emphasize U. S. interest. Yet, the U. S. Army does not optimally organize for these types of operations. While the preponderance of tactical and operational tasks remain the same, the conditions and standards for those tasks may change based on the operation occurring in a foreign country or here at home. The overwhelming majority of those tasks require enabling forces, not combat formations. These are the engineers, military police, civil affairs, and the like. No brigade-size formation exists with these capabilities organic to it. While it is true that the Army has developed the MEB, it is only a brigade-level headquarters absent organic, functional, subordinate enablers. The Army selects subordinate battalions based on the rotational ARFORGEN model. This lack of organic structure within maneuver support forces hampers training for operations and smacks of lack of cohesion and team building. These forces are potentially the main effort in stability and support operations.

Establish more MEBs in the Active Component. At least three MEBs could be established and based in the U. S. at little to no cost. These three brigades can then align with and focus on a specific portion of the ARFORGEN cycle. The multi-functionality of the MEB surpasses the capabilities of typical maneuver support functional brigades, especially during support or stability operations. One could argue the need, necessity, and utility of an Active Component CBRN Brigade. If functional

CBRN expertise were required for a contingency operation, the Army National Guard and Army Reserve each have a CBRN brigade. The three MEBs within the U. S. can then receive three of the Active Component CBRN battalions as subordinate battalions. One could use the same argument for Military Police or Engineer brigades in consideration as bill-payers for MEBs. As the new Defense Strategic Guidance reverberates, the U. S. Army must follow Secretary Panetta's guidance in [finding efficiencies in overhead and headquarters]; multifunctional headquarters like the MEB simply make better fiscal sense than functional, enabling brigades, given the guidance for the next decade.⁵⁸

In addition, and more globally, establishing an Active Component MEB in both the European Command and Pacific Command areas provides forward enabling presence, reactivity for crises, and structural cost savings over existing maneuver support functional brigades, in terms of greater breadth of function. These commands can then utilize the expertise found organic to MEBs for crisis action or nascent theater security cooperation operations.

Above all, in this era of economic deprivation, the budget for the CRE should not shrink disproportionately to other activities. Doing so will directly affect the ability to save American lives in the immediate aftermath of a crisis on American soil. When a disaster occurs, Americans will want the full benefit of their taxes supporting them, not foreigners. Strategic leadership has recognized this and in his 2012 Defense Strategic Guidance, Secretary Panetta related as one of the priorities, "We will also come to the assistance of domestic civil authorities... in case of natural disasters, potentially in response to a very significant or even catastrophic event. Homeland defense and

support to civil authorities require strong, steady-state force readiness.”⁵⁹ And, more specifically to the current CRE, he added, “In partnership with other elements of the U.S. Government, DOD will continue to invest in capabilities to detect, protect against, and respond to WMD use, should preventive measures fail.”⁶⁰ Secretary Panetta’s guidance also provides impetus to obtain more return on investment by extending the time horizon of trained forces within the ARFORGEN cycle for the CRE mission beyond its normal one year cycle.

Conclusion

Though focused on the most complex DSCA mission, those that deal with CBRN environments, the CRE has potential for other civil support tasks and overseas stability operations as well. Those same forces designed to contend with a CBRN incident can and should be prepared to deal with the other three tasks under civil support; and those of stability operations as well. While civil support operations are not the top priority of the DOD, it is within the top ten of the new Defense Strategic Guidance. Further, the recommendations herein follow the guidance provided by the Secretary of Defense and by extension can assist in solving four of the ten primary missions for the DOD as priorities for 21st Century defense. Recognizably, this truly is a no-fail mission area in the eyes of the American citizenry.

Endnotes

¹ Lieutenant General Guy C. Swan, III, “U.S. Army North: A 'No-Fail' Mission”, *Army*, (Washington, DC: Department of the Army, October 2010), 215.

² Advisory Panel on Department of Defense Capabilities for Support of Civil Authorities After Certain Incidents, *Before Disaster Strikes, Imperatives for Enhancing Defense Support of Civil Authorities*, (Washington, DC; September 15, 2010), <http://www.rand.org/nsrd/DoD-CBRNE-Panel>, (accessed February 8, 2011).

³ Ibid., vi.

⁴ *The Robert T. Stafford Disaster and Emergency Assistance Act*, Public Law 93-288, as amended, 42 United States Code 5121-5207.

⁵ Ibid., Section 401.

⁶ U. S. Department of Homeland Security, *Overview of Stafford Act Support to States*, (Washington, DC: U. S. Department of Homeland Security, undated) <http://www.fema.gov/pdf/emergency/nrf/nrf-stafford.pdf> (accessed December 23, 2011).

⁷ *The Robert T. Stafford Disaster and Emergency Assistance Act*, Public Law 93-288, as amended, 42 United States Code 5121-5207, section 403, c. (1).

⁸ United States Congress, *The Constitution of the United States of America*, Article 1, Section Eight, (Philadelphia, PA, 1789), http://www.usconstitution.net/xconst_A1Sec8.html, accessed February 12, 2012.

⁹ Advisory Panel on Department of Defense Capabilities for Support of Civil Authorities After Certain Incidents, *Before Disaster Strikes, Imperatives for Enhancing Defense Support of Civil Authorities*, (Washington, DC; September 15, 2010), <http://www.rand.org/nsrd/DoD-CBRNE-Panel>, (accessed February 8, 2011), 18.

¹⁰ Ibid.

¹¹ Barack Obama, *National Security Strategy*, (Washington, DC: The White House, May 2010), 18.

¹² Ibid.

¹³ Barack Obama, Presidential Policy Directive 8, *National Preparedness*, (Washington, DC, The White House; March 30, 2011), http://www.dhs.gov/xabout/laws/gc_1215444247124.shtm, (accessed January 21, 2012).

¹⁴ Robert M. Gates, *Quadrennial Defense Review* (Washington DC: U.S. Department of Defense, February 2010), 19.

¹⁵ Ibid.

¹⁶ Admiral Michael G. Mullen, *The National Military Strategy of the United States: Redefining America's Military Leadership*, (Washington DC: Chairman of the Joint Chiefs of Staff, February 8, 2011), 10.

¹⁷ Advisory Panel on Department of Defense Capabilities for Support of Civil Authorities After Certain Incidents, *Before Disaster Strikes, Imperatives for Enhancing Defense Support of Civil Authorities*, (Washington, DC; September 15, 2010), <http://www.rand.org/nsrd/DoD-CBRNE-Panel>, (accessed February 8, 2011), vi.

¹⁸ Ibid.

¹⁹ General Charles Jacoby, Jr., “Contingency Plan 3500-11, CBRN Response” Peterson Air Force Base, Colorado Springs, CO, U. S. Northern Command, August 17, 2011, 12.

²⁰ Ibid., 16.

²¹ Lieutenant General William Caldwell IV, assumption of command speech, January 17, 2012, <http://www.northcom.mil/News/2012/011712.html> (accessed January 21, 2012).

²² U. S. Department of Homeland Security, Federal Emergency Management Agency, *National Advisory Council Report*, (Washington, DC: U. S. Department of Homeland Security, January 1, 2011) http://www.fema.gov/pdf/about/nac/nac_nrf_01_28_2011.pdf (accessed December 23, 2011).

²³ U. S. Department of Homeland Security, Federal Emergency Management Agency, *Emergency Support Functions Annex*, (Washington, DC: U. S. Department of Homeland Security, January 2008) <http://www.fema.gov/pdf/emergency/nrf/nrf-esf-intro.pdf> (accessed December 23, 2011).

²⁴ Ibid.

²⁵ Robert M. Gates, *Quadrennial Defense Review* (Washington DC: U.S. Department of Defense, February 2010), 19.

²⁶ Ibid.

²⁷ Ron Hessdoerfer, “CBRN Enterprise Training and Evaluation Implementation,” briefing slides, Colorado Springs, CO, U.S. Northern Command, May 24, 2010.

²⁸ U. S. National Guard Bureau, *National Guard response force fact sheet* (Arlington, VA: Government Printing Office, 2010).

²⁹ Ron Hessdoerfer, “CBRN Enterprise Training and Evaluation Implementation,” briefing slides, Colorado Springs, CO, U.S. Northern Command, May 24, 2010.

³⁰ General Charles Jacoby, Jr., “Contingency Plan 3500-11, CBRN Response” Peterson Air Force Base, Colorado Springs, CO, U. S. Northern Command, August 17, 2011, GL-9.

³¹ Ibid., GL-15.

³² Major Nicholas Dall, L., *The DOD CRE: Have we learned the lessons to ensure an effective response?* Master of Military Arts and Science Degree (Fort Leavenworth, KS: U.S. Army Command and Staff Officers College, January 2011).

³³ Christine Le Jeune, “Consequence Management; Steps in the Right Direction,” AUSA, Institute of Land Warfare, *National Security Watch*, NSW 10-2, September 8, 2010.

³⁴ Ibid.

³⁵ U. S. Department of Defense, Office of the Secretary of Defense, *Public Affairs News Release No 740-11*, (Washington, DC; Office of the Secretary of Defense, August 26, 2011),

<http://www.defense.gov/releases/release.aspx?releaseid=14752> (accessed December 28, 2011).

³⁶ Christine Le Jeune, "Consequence Management; Steps in the Right Direction," AUSA, Institute of Land Warfare, *National Security Watch*, NSW 10-2, September 8, 2010.

³⁷ Admiral Michael G. Mullen, *The National Military Strategy of the United States: Redefining America's Military Leadership*, (Washington DC: Chairman of the Joint Chiefs of Staff, February 8, 2011), 20.

³⁸ U. S. Department of the Army, *Maneuver Enhancement Brigade Operations*, Field Manual 3-90.31 (Washington, DC: U. S. Department of the Army, February 26, 2009), viii.

³⁹ *Ibid.*, 2-3.

⁴⁰ Major Andrew Morgan, email message to author, 2 August 2011.

⁴¹ *Ibid.*

⁴² U. S. Department of the Army, *Civil Support Operations*, Field Manual 3-28 (Washington, DC: U. S. Department of the Army, August 20, 2010), vii.

⁴³ *Ibid.*, vii.

⁴⁴ *Ibid.*, 1-1.

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*, 1-12.

⁴⁷ *Ibid.*, 8-21.

⁴⁸ *Ibid.*, Appendix J.

⁴⁹ U. S. Department of the Army, *Maneuver Enhancement Brigade Operations*, Field Manual 3-90.31 (Washington, DC: U. S. Department of the Army, February 26, 2009), 2-1.

⁵⁰ Colonel Mark Johnson, *Reforming Disaster and Emergency Response*, Strategy Research Project (Carlisle Barracks, PA: U. S. Army War College, March 23, 2011), 10.

⁵¹ U. S. Department of the Army, *Civil Support Operations*, Field Manual 3-28 (Washington, DC: U. S. Department of the Army, August 20, 2010), 1-9.

⁵² Barack Obama, *National Security Strategy*, (Washington, DC: The White House, May 2010), 34.

⁵³ State of Washington, Joint Force Headquarters briefing, "Washington Homeland Response Force Construct", (Seattle, WA; undated).

⁵⁴ Ron Hessdoerfer, "CBRN Enterprise Training and Evaluation Implementation," briefing slides, Colorado Springs, CO, U.S. Northern Command, May 24, 2010.

⁵⁵ General Charles Jacoby, Jr., “Contingency Plan 3500-11, CBRN Response” Peterson Air Force Base, Colorado Springs, CO, U. S. Northern Command, August 17, 2011, 15.

⁵⁶ Melody Eady, The Rescue Technician and NFPA Standards, <http://www.gpstc.org/docs/Articles%20of%20Interest/FORMATTED-%20Rescue%20Tech%20and%20NFPA%20standards.pdf> (accessed January 21, 2012).

⁵⁷ Admiral Michael G. Mullen, *The National Military Strategy of the United States: Redefining America’s Military Leadership*, (Washington DC: Chairman of the Joint Chiefs of Staff, February 8, 2011), 18.

⁵⁸ Leon Panetta, *Sustaining U. S. Global Leadership: Priorities for 21st Century Defense*, (Washington, DC: U. S. Department of Defense, January 5, 2012), 7.

⁵⁹ Ibid., 5.

⁶⁰ Ibid.

